

Maintenance Safety Improvements (Contract No. 04-001644)

The as-built drawings, which are contained in these CDs, are scanned from drawings of the existing structure for the convenience of the contractor and as a means to convey to the contractor the available information regarding the existing structure. It is to be understood that no claim is being made as to the accuracy or completeness of the said information and that the State of California or its officers or agents shall not be responsible for the manner in which the contractor interprets and uses this information or for the accuracy, currency or completeness of these scanned as-built drawings. The contractor shall be responsible to obtain, at the contractor’s expense, any additional information that the contractor deems necessary for completely and accurately assessing the existing conditions of the structure. The contractor shall not be entitled to any compensation for any claim arising from inaccuracy or insufficiency of these as-built drawings or in anyway related to these drawings.

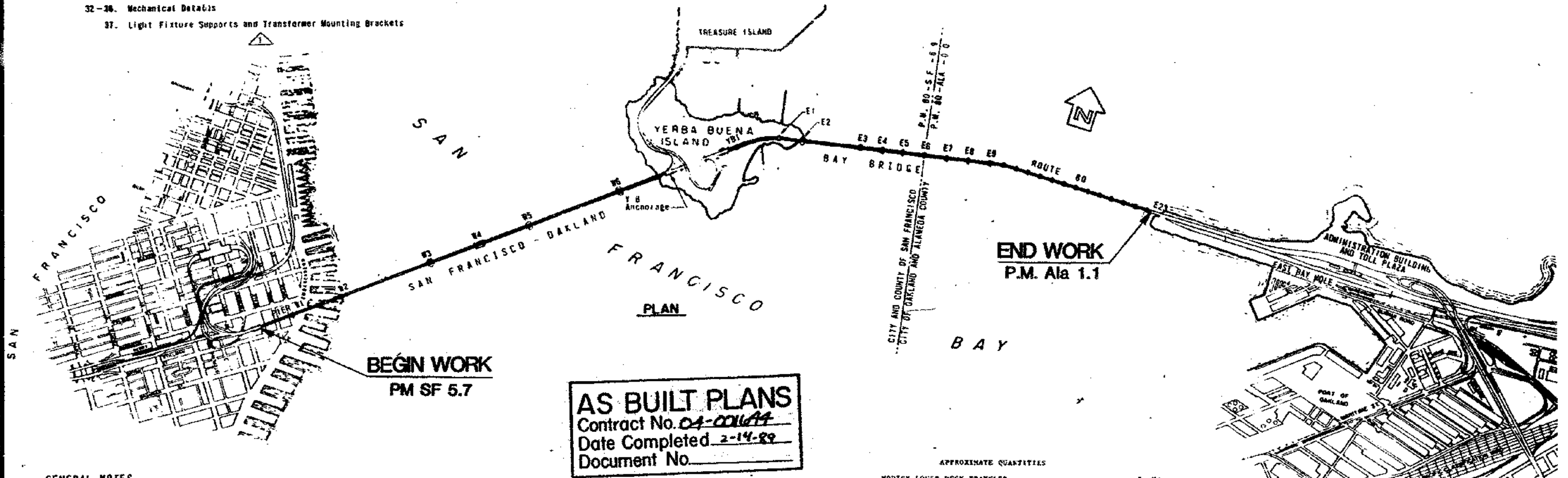
- [1. General Plan](#)
- [2. Bridge Elevation – West Bay](#)
- [3. Bridge Elevation – East Bay](#)
- [4. Light Pole Bracket Modifications](#)
- [5. 504’ Span Stairway Details – 1](#)
- [6. 504’ Span Stairway Details - 2](#)
- [7. Unreadable](#)
- [8. Cantilever Spans Stairway Details – 1](#)
- [9. Cantilever Spans Stairway Details – 2](#)
- [10. Cantilever Spans Walkway Details – 1](#)
- [11. Cantilever Spans Walkway Details – 2](#)
- [12. Cantilever Spans Walkway Details – 3](#)
- [13. Cantilever Spans Walkway Details – 4](#)
- [14. Cantilever Spans Walkway Details – 5](#)
- [15. West Bay Lower Deck Traveler Modifications – 1](#)
- [16. West Bay Lower Deck Traveler Modifications – 2](#)
- [17. Movable Ladder Modifications – 1](#)
- [18. Movable Ladder Modifications – 2](#)
- [19. Truss Web Scaffold Details – 1](#)
- [20. Truss Web Scaffold Details – 2](#)
- [21. Truss Web Scaffold Details – 3](#)
- [22. Truss Web Scaffold Details – 4](#)
- [23. West Bay Upper Deck Traveler, Half Plan, Half Framing Plan, Sections](#)
- [24. West Bay Upper Deck Traveler – Details 1](#)
- [25. West Bay Upper Deck Traveler – Details 2](#)
- [26. West Bay Upper Deck Traveler Plank Support and Railing](#)
- [27. East Bay Upper Deck Traveler](#)
- [28. East Bay Upper Deck Traveler, Plank Support and Railing Details](#)
- [29. Safety Nets for West Bay and East Bay Upper Deck Travelers](#)
- [30. Safety Net Details](#)
- [31. East & West Upper Deck Traveler-Air Line](#)
- [32. Upper Deck Traveler Air Piping Diagram](#)
- [33. Air Brake Details](#)
- [34. Truss Web Scaffold](#)
- [35. Truss Web Scaffold Control Details](#)
- [36. Light Fixture Supports and Transformer Mounting Brackets](#)

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAYIN THE CITY AND COUNTY OF SAN FRANCISCO
AND IN ALAMEDA COUNTY IN OAKLAND AT THE
SAN FRANCISCO-OAKLAND AT THE BAY BRIDGE

INDEX TO SHEETS

SHEET NUMBER	TITLE
1.	General Plan, Title and Location map
2.	Bridge Elevation - West Bay
3.	Bridge Elevation - East Bay
4.	Light Pole Bracket Modifications
5-8.	504 Spans Stairway Details
7-8.	504 Spans Walkway Details
9-10.	Canilever Spans Stairway Details
11-15.	Canilever Spans Walkway Details
16-17.	West Bay Lower Deck Traveler Modifications
18-19.	Movable Ladder Modifications
20-23.	Truss Web Scaffold Details
24-31.	Upper Deck Traveler Details
32-36.	Mechanical Details
37.	Light Fixture Supports and Transformer Mounting Brackets



GENERAL NOTES

1. All dimensions of the existing structure necessary to perform the work shown on these sheets shall be verified by the Contractor in the field. Dimensions shown for the existing structure are taken from construction drawings. The Contractor shall verify field dimensions and shall be responsible for finished structures fitting existing conditions since minor variations are to be anticipated.

The Contractor shall possess the Class (or Classes) of license as specified in the "Notice to Contractors" on page 1 of the Special Provisions.

APPROXIMATE QUANTITIES

MODIFY LOWER DECK TRAVELER	3	EA
RELOCATE MOVABLE LADDER	14	EA
MODIFY AND RELOCATE MOVABLE LADDER	12	EA
TRUSS WEB SCAFFOLD	2	EA
UPPER DECK TRAVELER	4	EA

FINAL PAY QUANTITIES

MISCELLANEOUS METAL (BRIDGE)	129,000	LB
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	5.7/8.9/0.0/1.1	1	36/37

CHIEF OFFICE OF STRUCTURES
MAINTENANCE AND INVESTIGATION

May 4, 1987
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
IKUO NAGAI
No. C 12212
Exp. 3-31-89
CIVIL
STATE OF CALIFORNIA

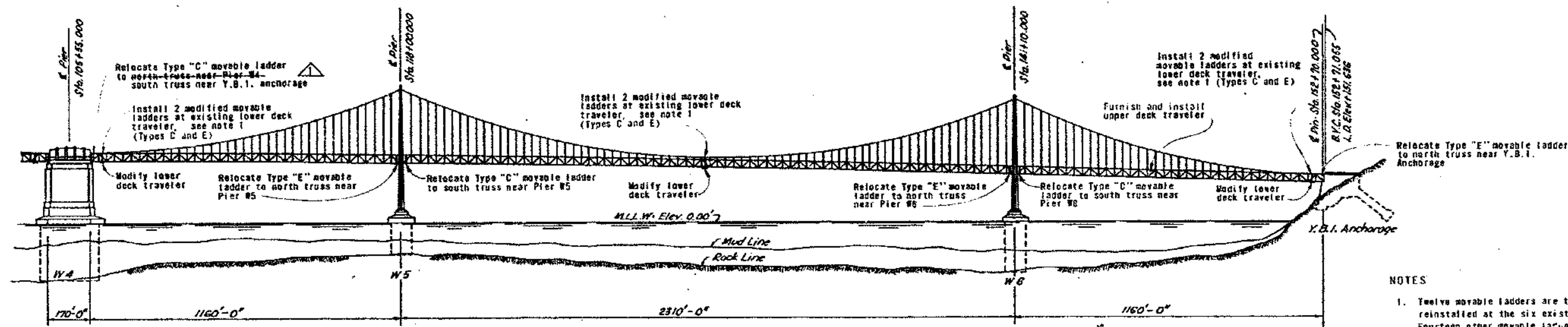
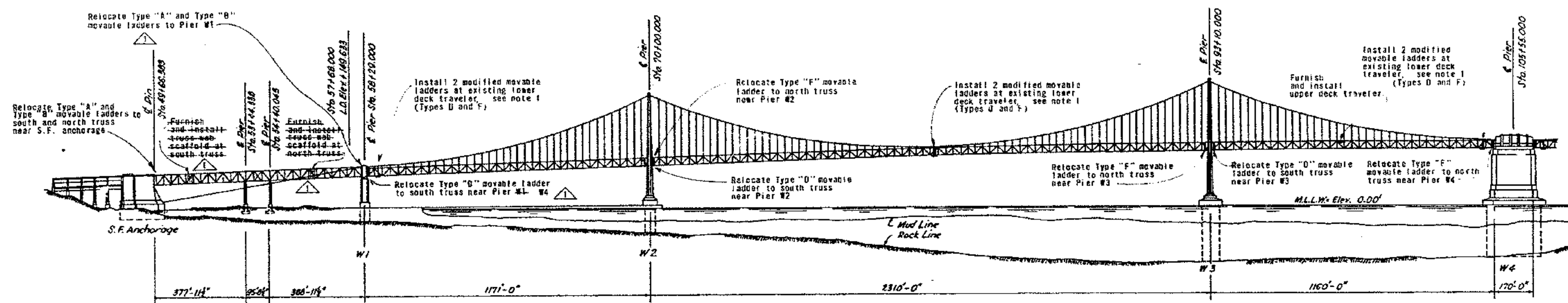
V. Paul
Chief Office of Office Engineer
Registered Civil Engineer

REGISTERED PROFESSIONAL ENGINEER
V. PAUL
No. 9587
Exp. 12-31-89
CIVIL
STATE OF CALIFORNIA

Contract No.	04-001644
Date Accepted	2-16-89
As Built	With revision
Resident Engineer	BOSS Chittenden
Revised By	F. Zanetich
Date	11-17-88

CONTRACT NO. 04-001644

Designed by S. Larson C12732	DESIGN By R. Keim Checked S. Larson	DETAILS By R. Keim Checked S. Larson	LAYOUT By R. Keim Checked S. Larson	QUANTITIES By R. Keim Checked S. Larson	SPECIFICATIONS By R. Keim Checked S. Larson	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES MAINTENANCE AND INVESTIGATIONS By R. Keim Checked S. Larson	BRIDGE NO. 33-25, 34-03 POST MILE 5.7/8.9	SAN FRANCISCO-OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS GENERAL PLAN
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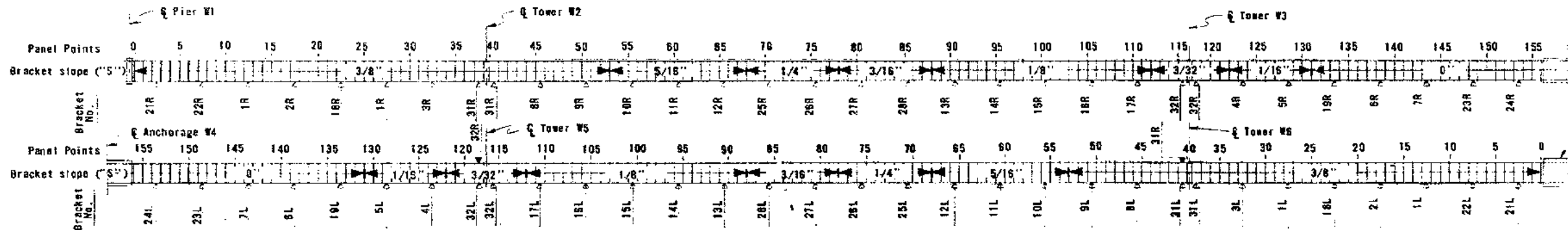


- NOTES
- Twelve movable ladders are to be modified and reinstalled at the six existing lower deck travelers. Fourteen other movable ladders are to be relocated as shown above. See MOVABLE LADDER MODIFICATIONS sheet for details and for the locations and types of the existing movable ladders.
 - Remove 56 light pole brackets from the upper deck and install 55 railing posts at the bracket removal locations between Pier W1 and the Y.B.I. Anchorage as shown on sheet 4.

AS BUILT PLANS
 Contract No. 04-001644
 Date Completed 2-14-89
 Document No. _____

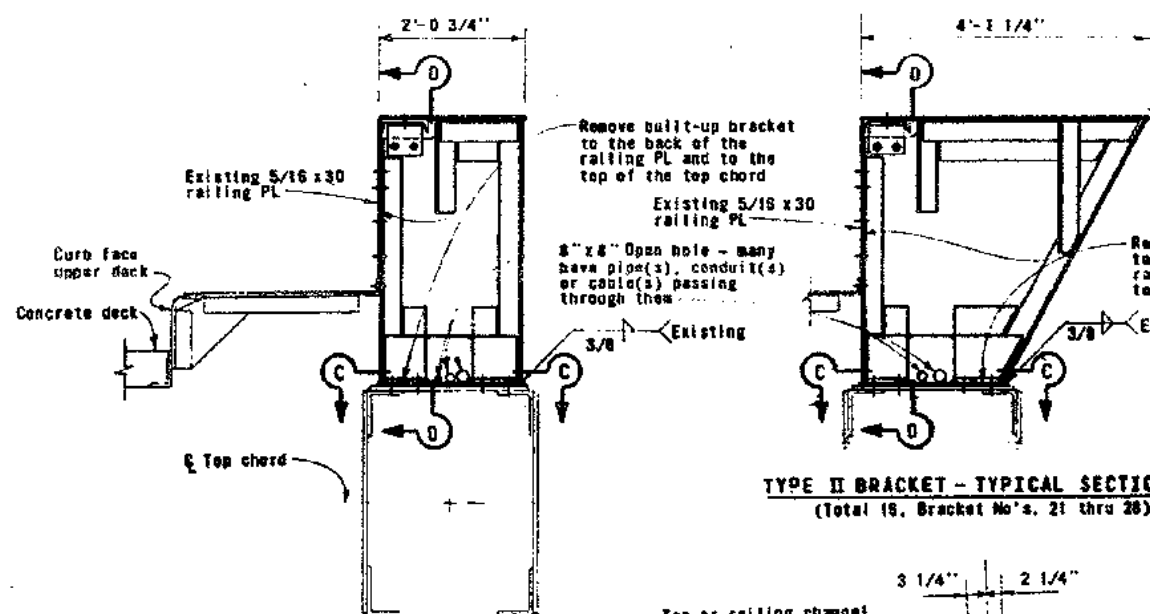
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Date Approved	2-14-89
Approved By	With Revisions
Checked By	Ross A. Chittenden
Drawn By	Janetich
Scale	11-17-86

DESIGN	By R. Keim	Checked S. Larsen	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES - MAINT.	BRIDGE NO.	33-25, 34-03	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS BRIDGE ELEVATION - WEST BAY
DETAILS	By A. Thiel	Checked S. Larsen			POST MILE		
QUANTITIES	By R. Keim	Checked					



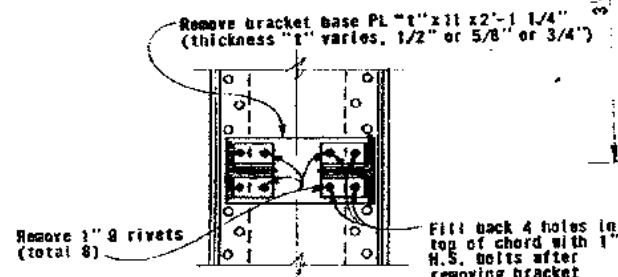
BRACKET LOCATION PLAN

1" = 200'

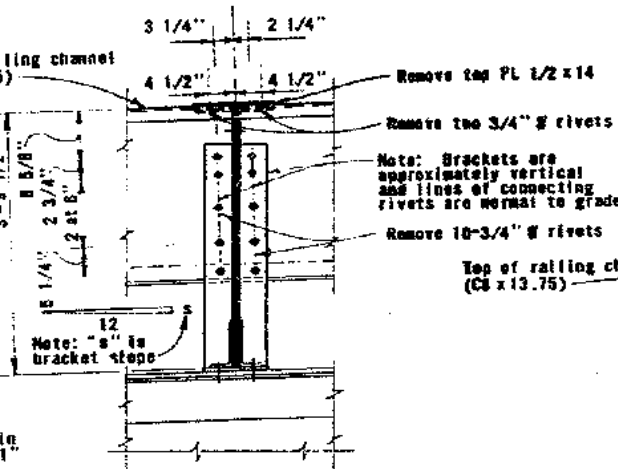


TYPE I BRACKET - TYPICAL SECTION

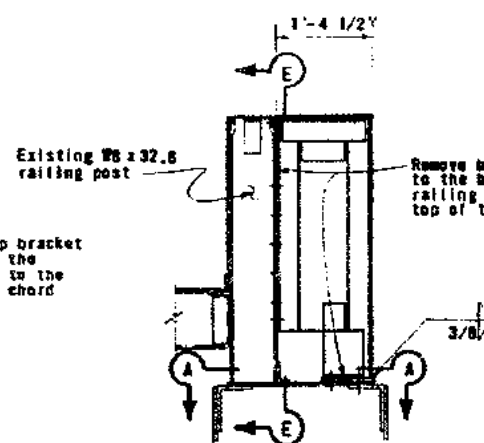
(Total 40, Bracket No's. 1 thru 19)



SECTION C-C

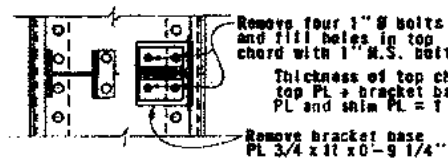


SECTION D-D

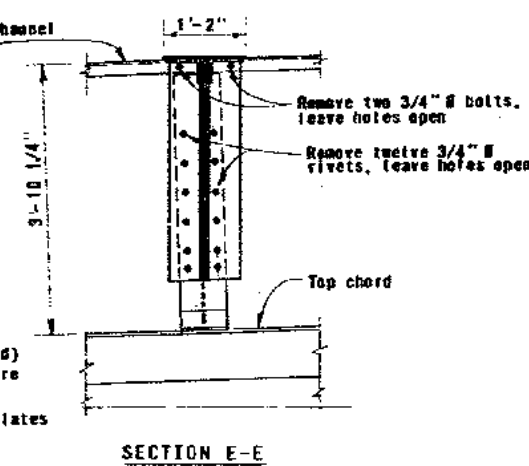


TYPE II BRACKET - TYPICAL SECTION

(Total 19, Bracket No's. 21 thru 28)



SECTION A-A

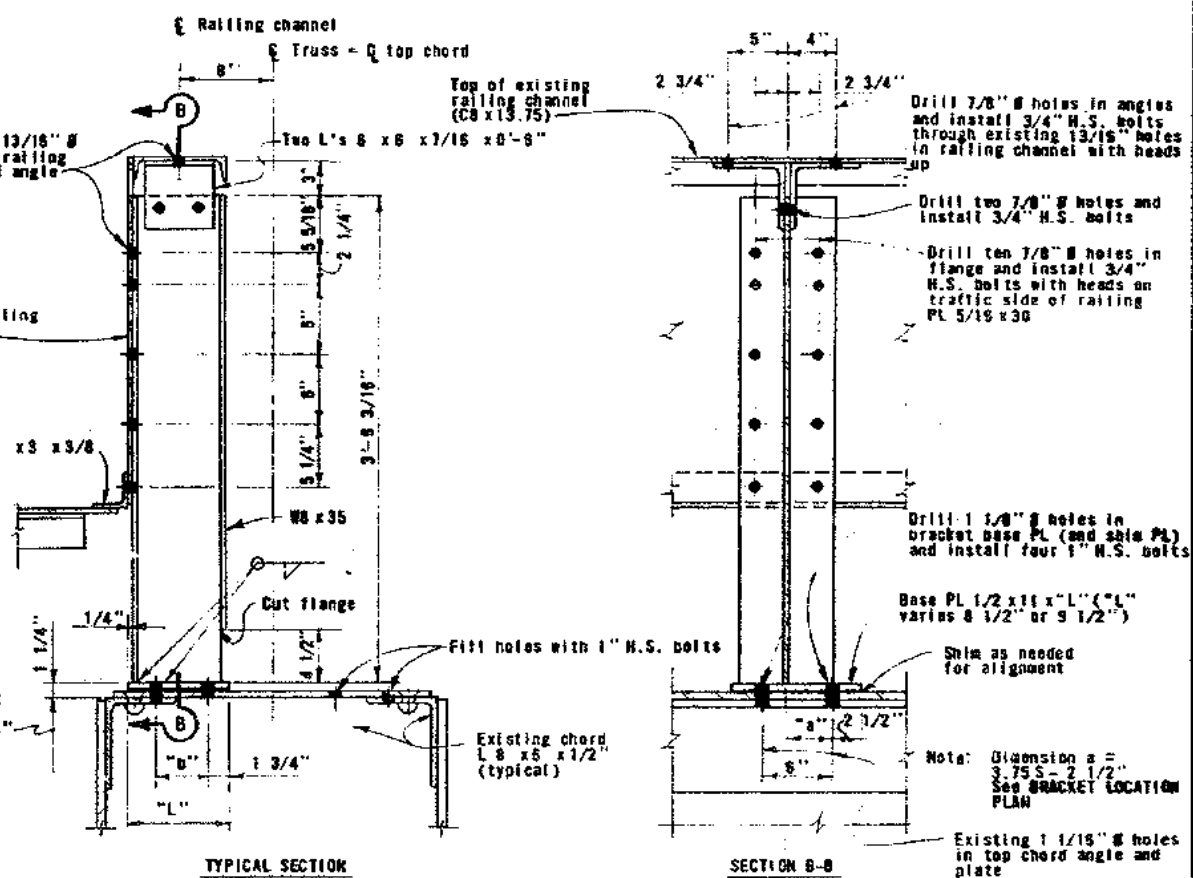


SECTION E-E

- Notes:
- Details shown are for the "R" (right hand) brackets, the "L" (left hand) brackets are opposite hand.
 - Fabrication rivets for these built-up (plates and angles) brackets are not shown.

BRACKET REMOVAL DETAILS

3/4" = 1'-0"



SECTION B-B

TABLE - DIMENSIONS "b" and "L"

Brackets Nos.	b	L
10 - 15 & 25 - 28	4"	8 1/2"
2 & 6	4"	9 1/2"
9 & 16	4 1/4"	8 1/2"
15 & 7	4 1/4"	9 1/2"
8 & 17	4 7/16"	8 1/2"
22 & 23	4 5/8"	9 1/2"
3 & 4	5 1/8"	9 1/2"
21 & 24	5 7/16"	9 1/2"
18 & 19	5 3/4"	9 1/2"

AS BUILT PLANS
Contract No. 04-001644
Date Completed 2-14-89
Document No.

Contract No. 04-001644
Date Accepted 2-14-89
As Built Without Revision
Resident Engineer Ross A. Chittenden
Reviewed By J. Zanetich Date 11-17-88

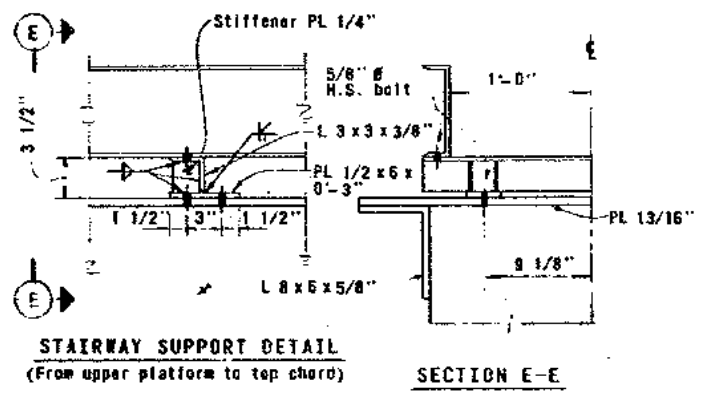
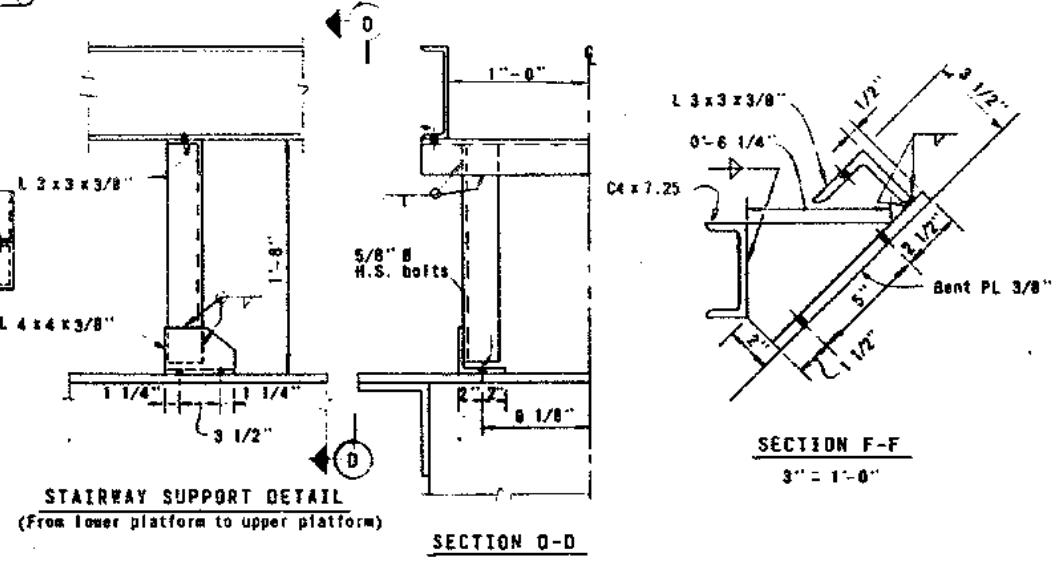
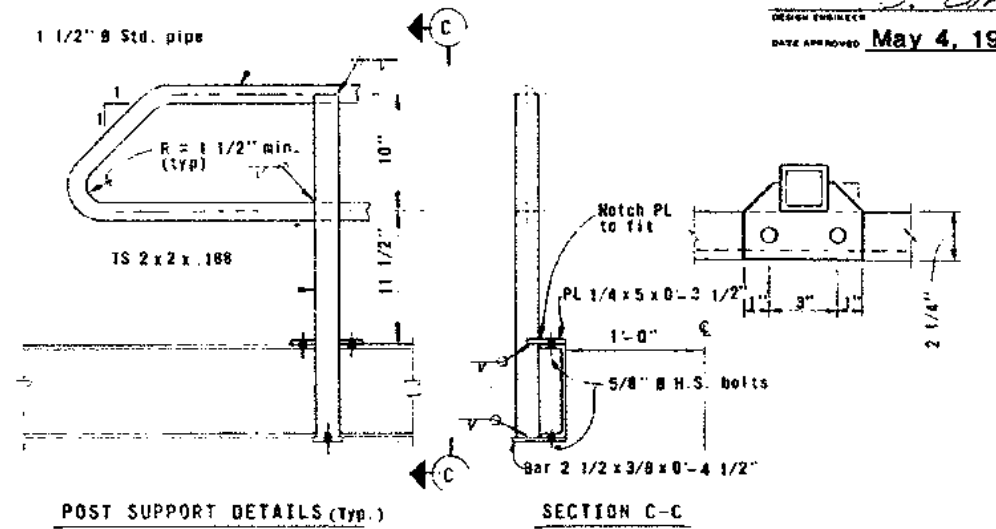
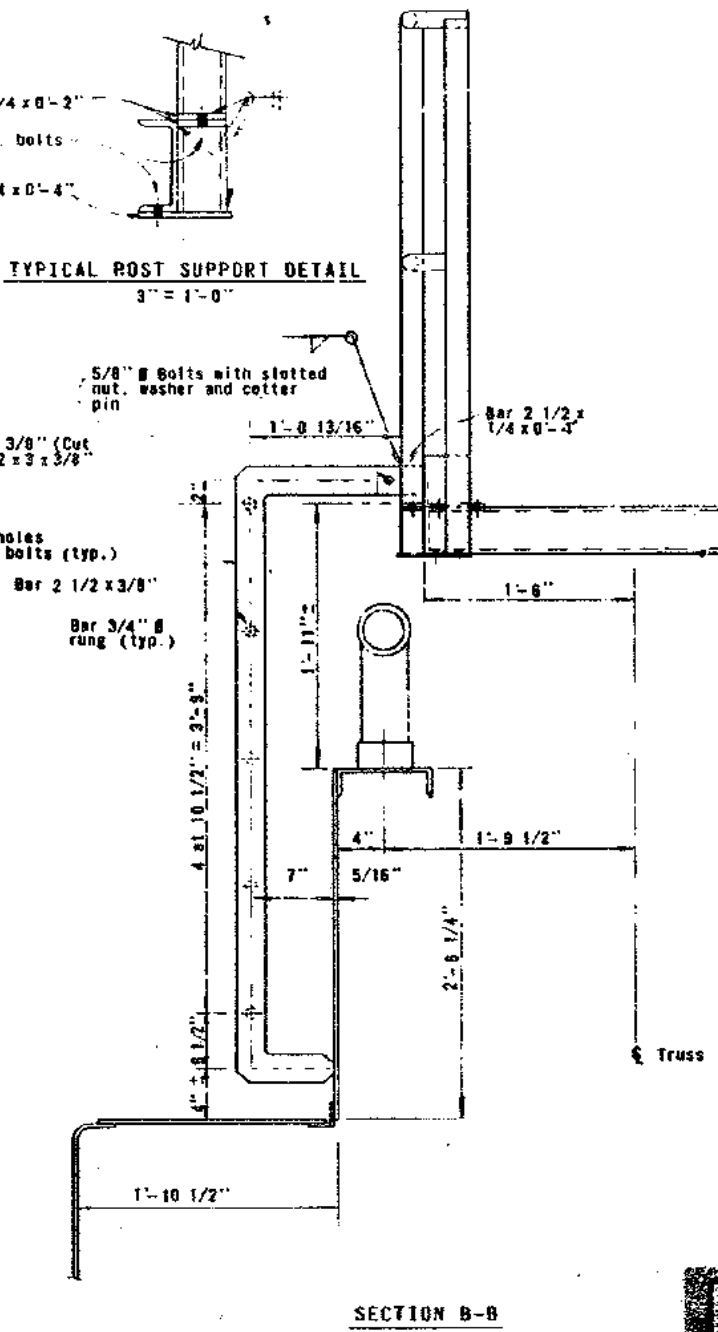
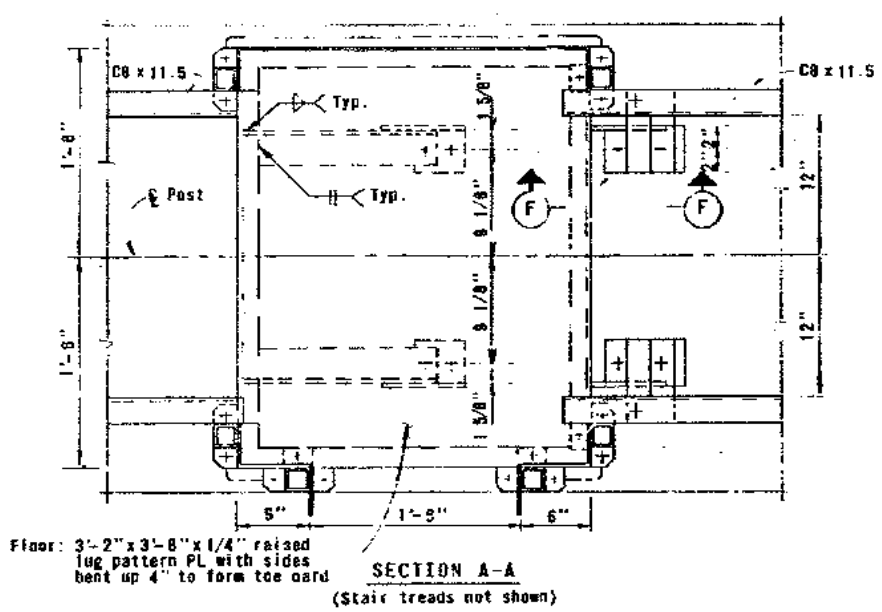
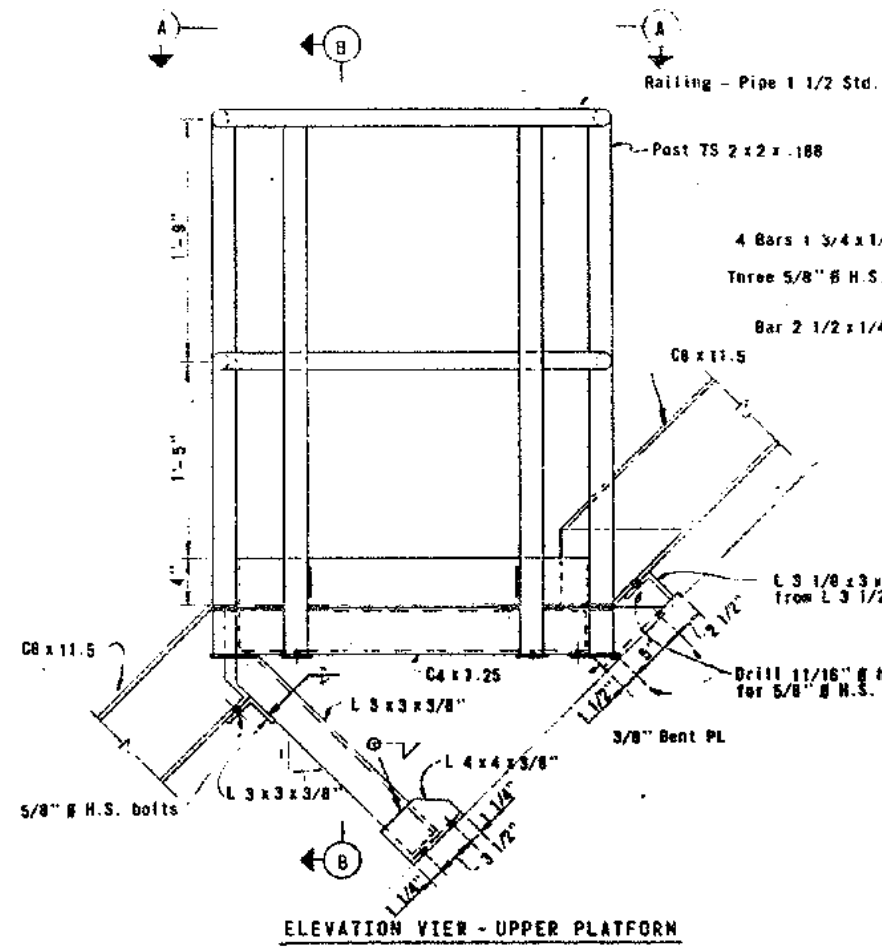
DESIGN	By R. Keim	Checked S. Larson
DETAILS	By R. Keim	Checked S. Larson
QUANTITIES	By R. Keim	Checked

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STRUCTURES - MAINT.
R. Keim
PROJECT ENGINEER

BRIDGE NO. 33-25, 34-03
POST MILE
SAN FRANCISCO - OAKLAND BAY BRIDGE
MAINTENANCE SAFETY IMPROVEMENTS
LIGHT POLE BRACKET MODIFICATIONS

DESIGN ENGINEER *S. Larson* 12722
 DATE APPROVED **May 4, 1987**



AS-BUILT PLANS
 Contract No. *04-00144*
 Date Completed *2-14-89*
 Document No.

Contract No.	04-00144
Date Accepted	2-14-89
As Built	Without Revision
Resident Engineer	Ross A. Chittenden
Revision By	W. Zanetich
Date	11-12-89

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— *Journal of the American Medical Association*, 1967, 201: 1009-1010.

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1. *Chlorophyll a* and *Chlorophyll b* contents were determined by the method of Arar and Cook (1987).

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 & \text{B}_{\text{min}} = 0.0001
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[illegible]
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Figure 1

[illegible]

THE NATIONAL ACADEMY OF SCIENCES
OF THE UNITED STATES OF AMERICA

Letter to the Editor

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 $\frac{1}{590295810358705651712} \log \frac{1}{590295810358705651712} = -0.5$
 $\frac{1}{1180591620717411303424} \log \frac{1}{1180591620717411303424} = -0.5$
 $\frac{1}{2361183241434822606848} \log \frac{1}{2361183241434822606848} = -0.5$
 $\frac{1}{4722366482869645213696} \log \frac{1}{4722366482869645213696} = -0.5$
 $\frac{1}{9444732965739290427392} \log \frac{1}{9444732965739290427392} = -0.5$
 $\frac{1}{18889465931478580854784} \log \frac{1}{18889465931478580854784} = -0.5$
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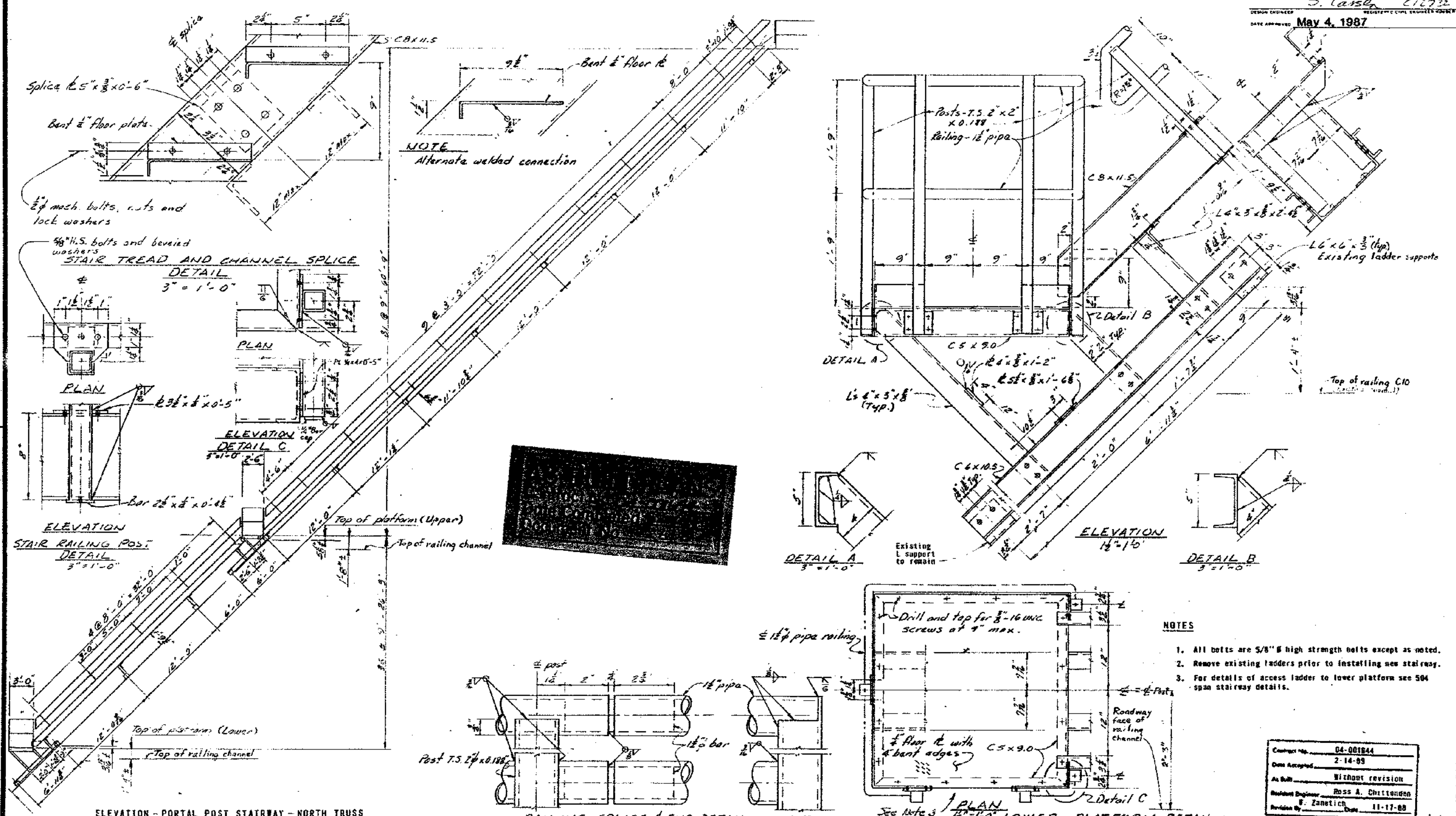
† „ - ” †

1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and data involved. For example, in a web application, this might involve identifying the server, database, and client-side code.

1. *Phragmites australis* (Cav.) Trin. ex Steud.

SEC - 287. NL 121 10011

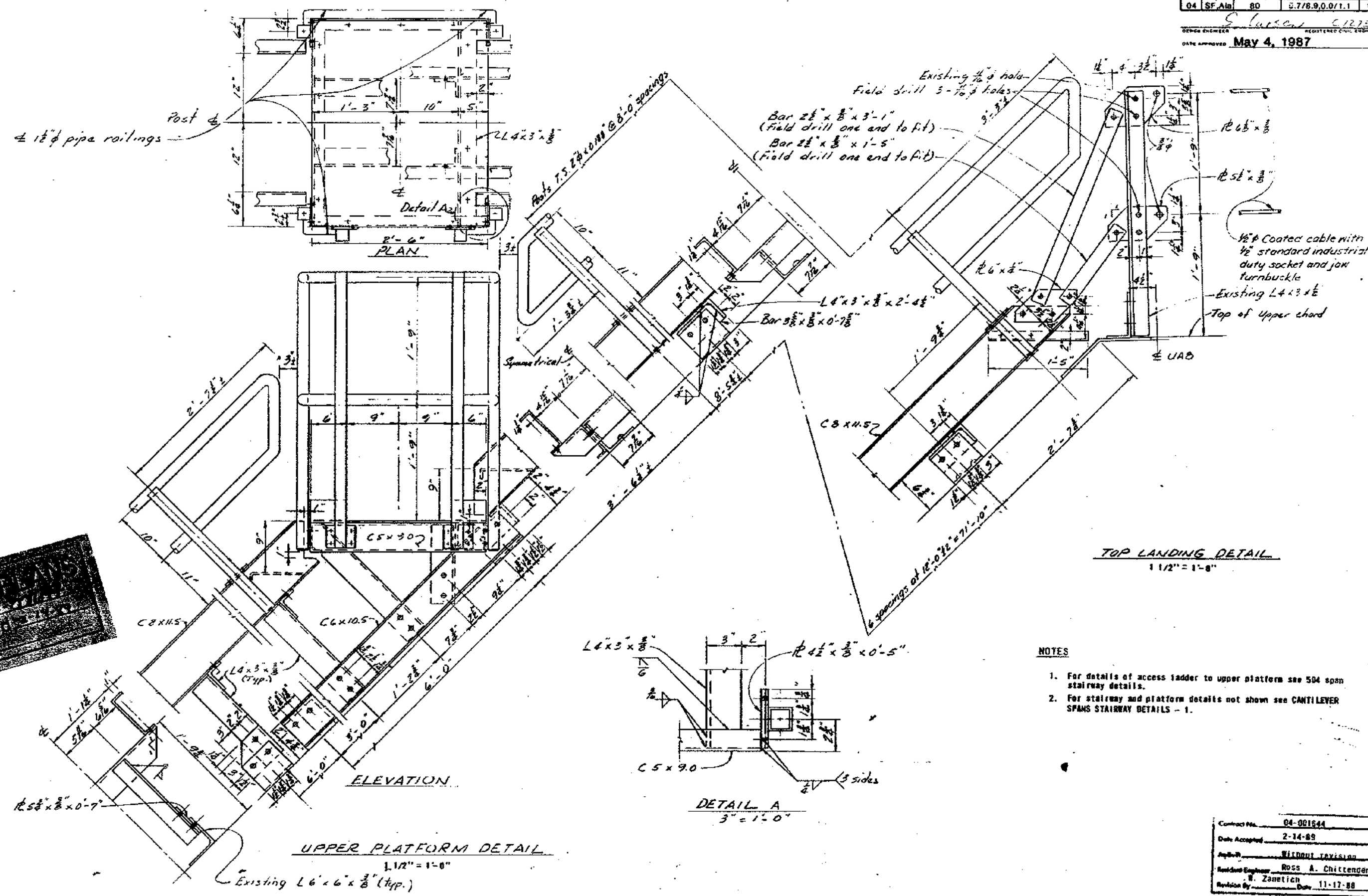
[illegible]



- NOTES**
1. All bolts are 5/8" high strength bolts except as noted.
 2. Remove existing ladders prior to installing new stairway.
 3. For details of access ladder to lower platform see 504 span stairway details.

Contract No.	04-001844
Date Accepted	2-14-83
As Built	Without revision
Resident Engineer	Ross A. Chittenden
Division	San Francisco
Date	11-17-88

DESIGN	BY T. Joe	CHECKED R. Keim	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION STRUCTURES - MAINT. T. Joe PROJECT ENGINEER	BRIDGE NO.	33-25, 34-83	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS CANTILEVER SPANS STAIRWAY DETAILS-1
DETAILS	BY T. Joe	CHECKED S. LOTSDEN		POST MILE		
QUANTITIES	BY R. Keim	CHECKED				



- NOTES**
1. For details of access ladder to upper platform see 504 span stairway details.
 2. For stairway and platform details not shown see CANTILEVER SPANS STAIRWAY DETAILS - 1.

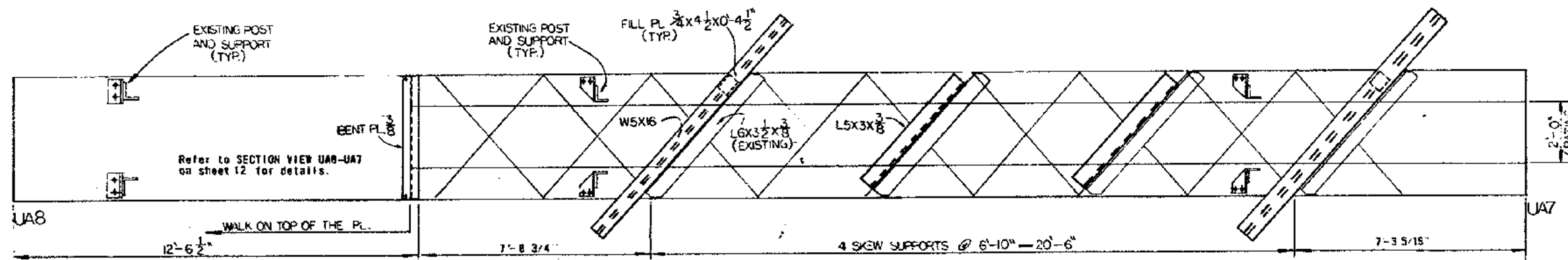
Contract No.	04-001644
Date Accepted	2-14-89
App'd By	WITHOUT REVISION
Resident Engineer	Ross A. Chittenden
Revision By	H. Zanetich
Revision Date	11-17-88

DESIGN	By T. Jee	Checked R. Klein
DETAILS	By T. Jee	Checked S. Larsen
QUANTITIES	By R. Klein	Checked

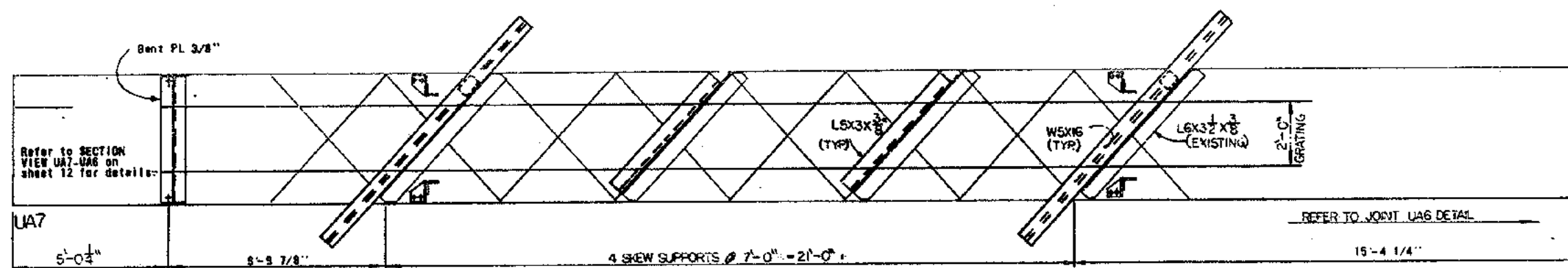
State of CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

BRIDGE NO.	33-25.34-03
POST MILE	
STRUCTURES - MAINT.	T. Jee

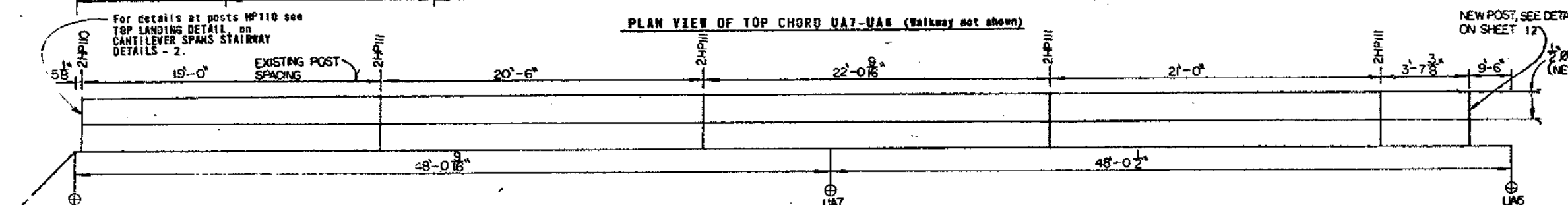
SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 CANTILEVER SPANS STAIRWAY DETAILS - 2



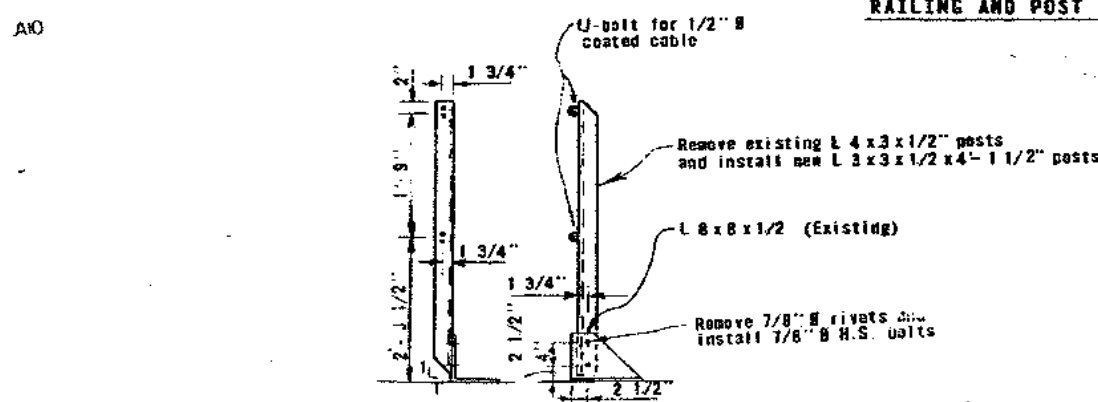
PLAN VIEW OF TOP CHORD UA8-UA7 (Walkway not shown)



PLAN VIEW OF TOP CHORD UA7-UA6 (Walkway not shown)

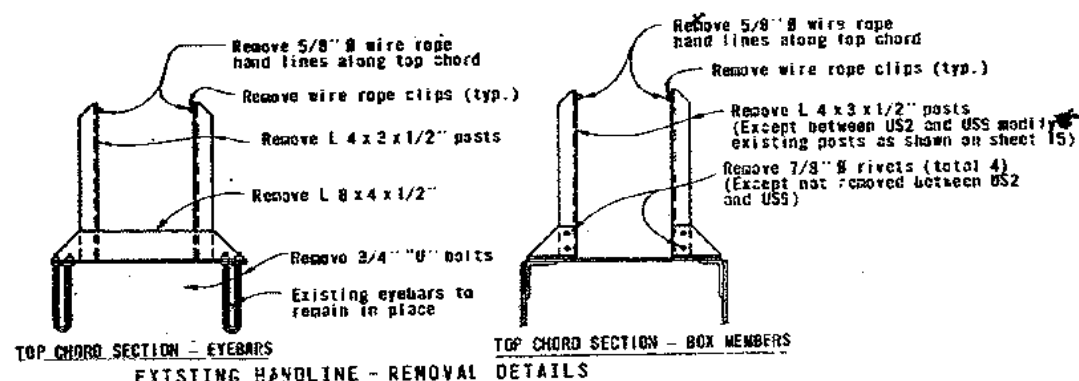


RAILING AND POST ELEVATION ON TOP CHORD UA8-UA6

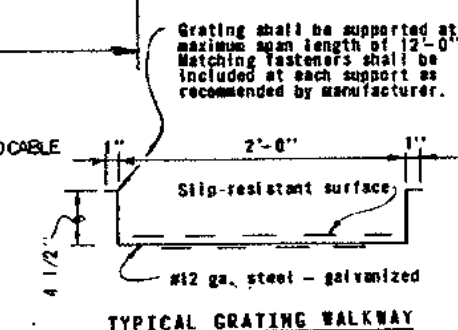


POST REPLACEMENT DETAIL

(At existing posts HP111, HP124, HP125 and HP153)



EXISTING HANDLINE - REMOVAL DETAILS



TYPICAL GRATING WALKWAY

NOTES

1. Remove existing cable handlines along top chord.
2. Install new 1/2" coated cables, walkway grating and supporting members.
3. For Typical Sections of Walkway see WALKWAY DETAILS - 2.

Contract No.	04-001644
Date Accepted	2-14-89
As Built	Without revision
Resident Engineer	Ross A. Chittenden
Revision By	J. Zanetich
Date	11-17-88

DESIGN	By J. Shiah	Checked R. Keiz
DETAILS	By J. Shiah	Checked S. Larsen
QUANTITIES	By R. Keiz	Checked

State of
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STRUCTURES - MAINT.

BRIDGE NO.
33-25, 34-03
POST MILE

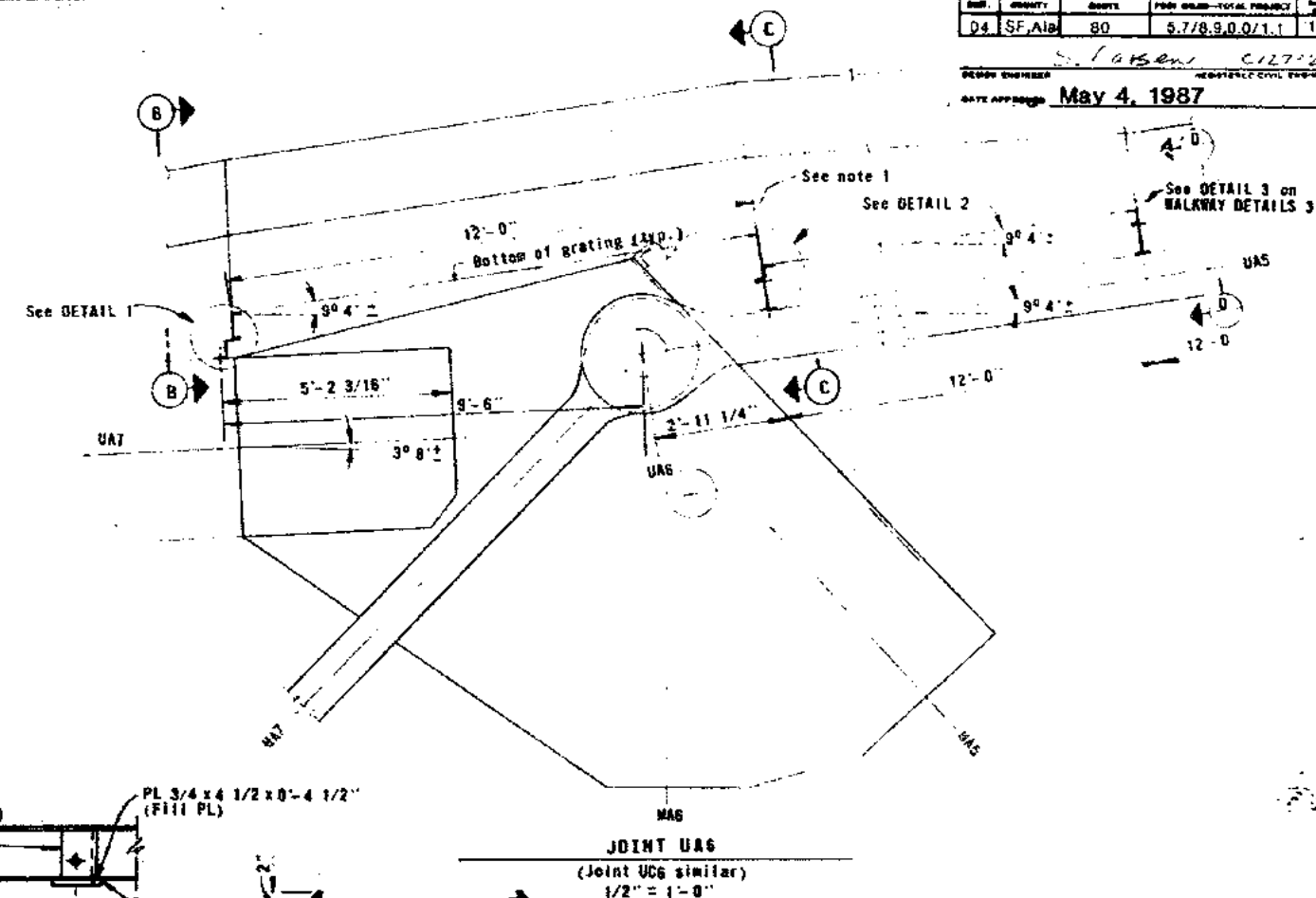
SAN FRANCISCO - OAKLAND BAY BRIDGE
MAINTENANCE SAFETY IMPROVEMENTS

CANTILEVER SPANS WALKWAY DETAILS - 1

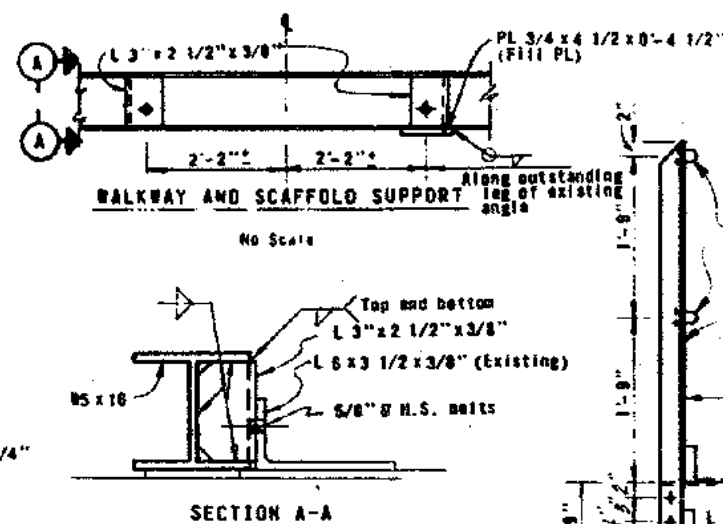
REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 11 OF 11

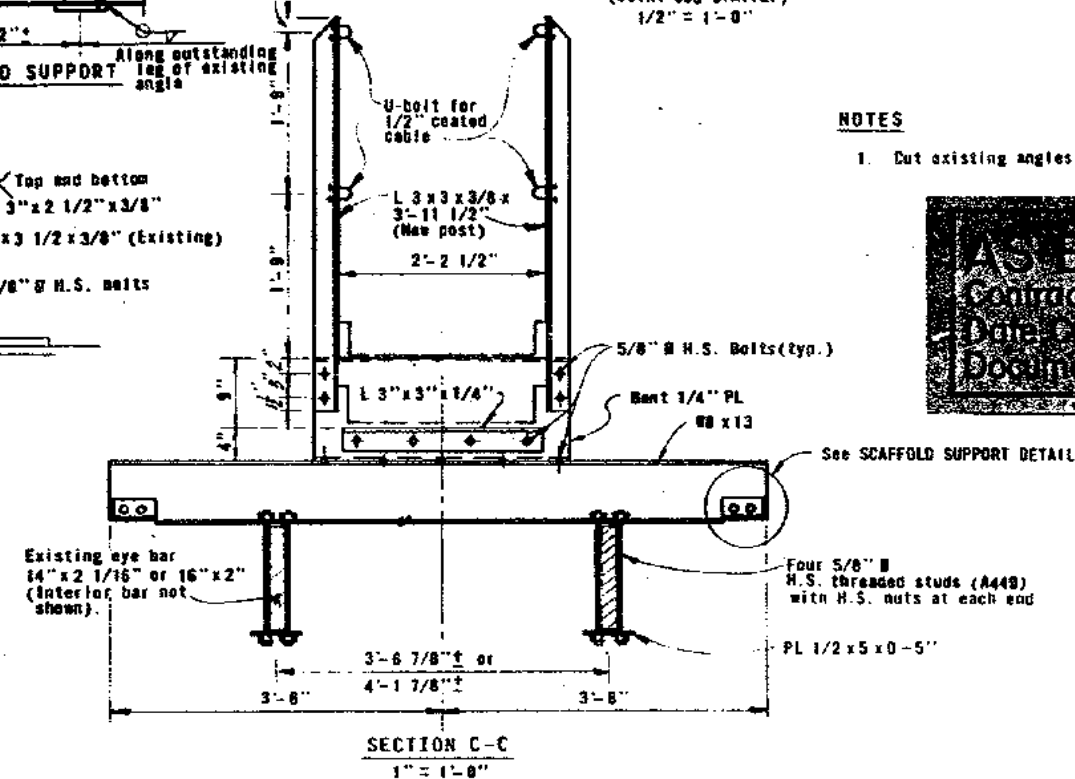
DESIGN ENGINEER REVISOR/CORR. ENGINEER NUMBER
DATE APPROVED **May 4, 1987**



SECTION VIEW OF U48 - U47 - U46 (with scaffolding)
1" = 1'-0"



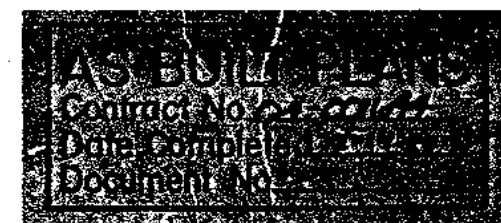
SECTION A-A



SECTION C-C
1" = 1'-0"

NOTES

1. Cut existing angles as necessary to clear gratings.



Contract No. 04-601544
 Date Accepted 2-14-89
 As Built Without revision
 Resident Engineer Ross A. Chittenden
 Revision By J. Zanetich Date 11-17-88

DESIGN	By J. Shah	Checked R. Kelm
DETAILS	By J. Shah	Checked S. Larsen
QUANTITIES	By R. Kelm	Checked

State of
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

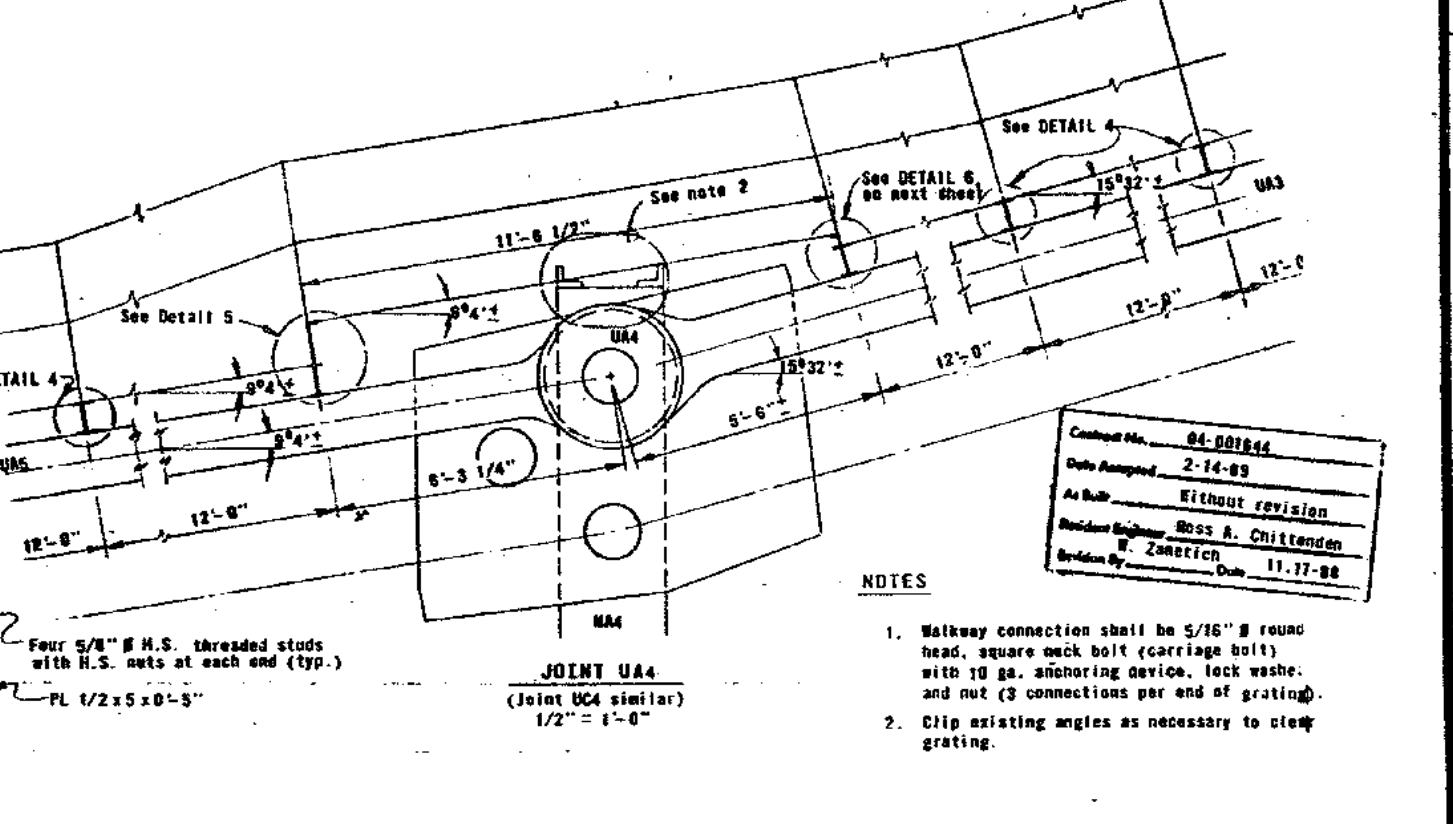
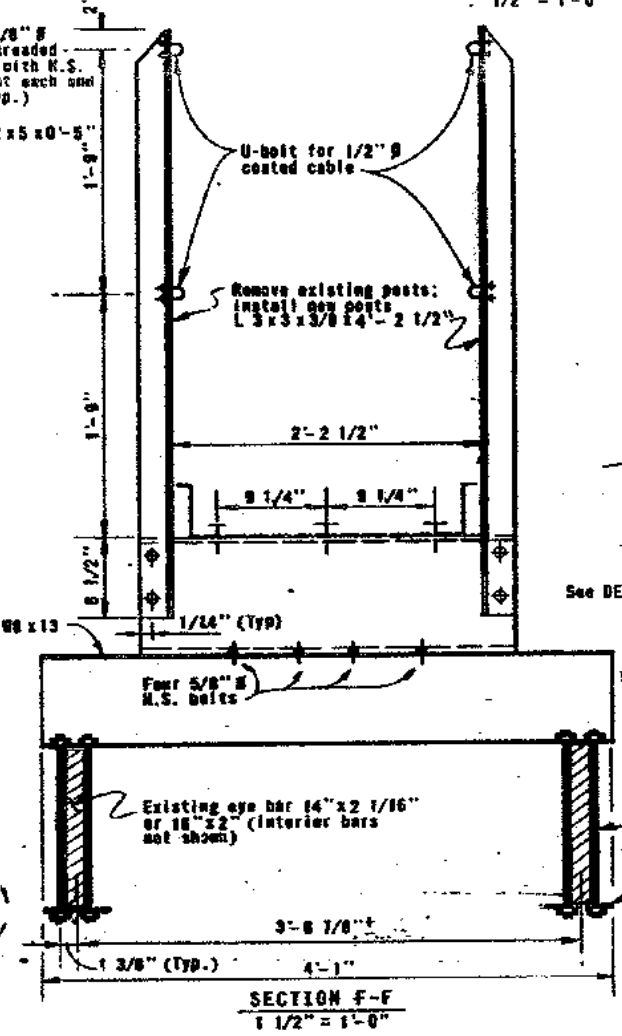
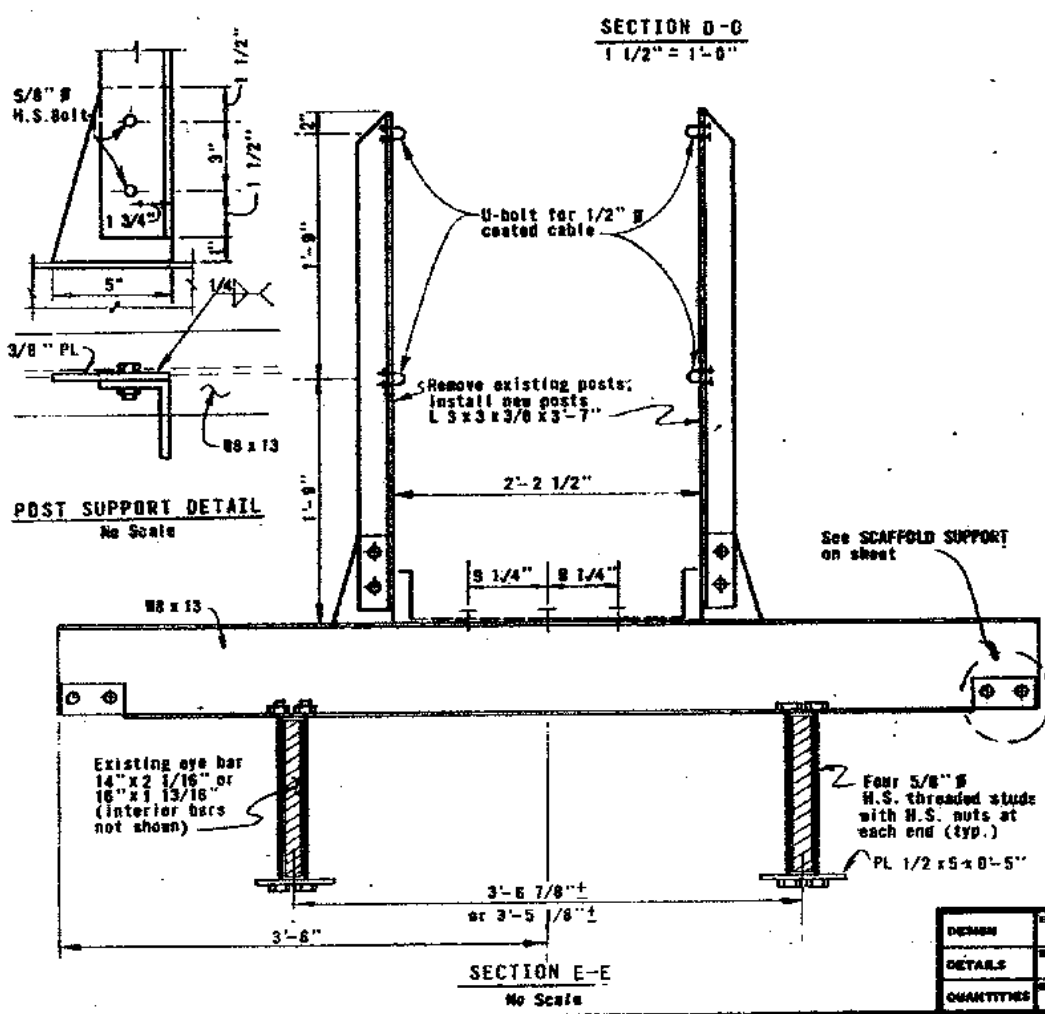
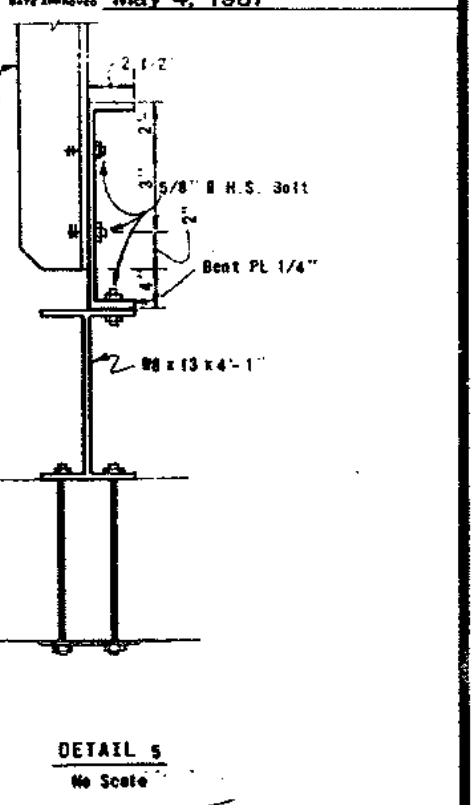
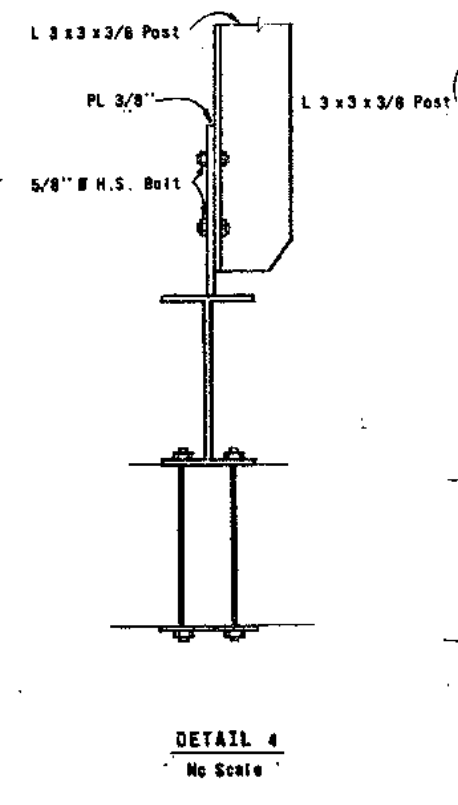
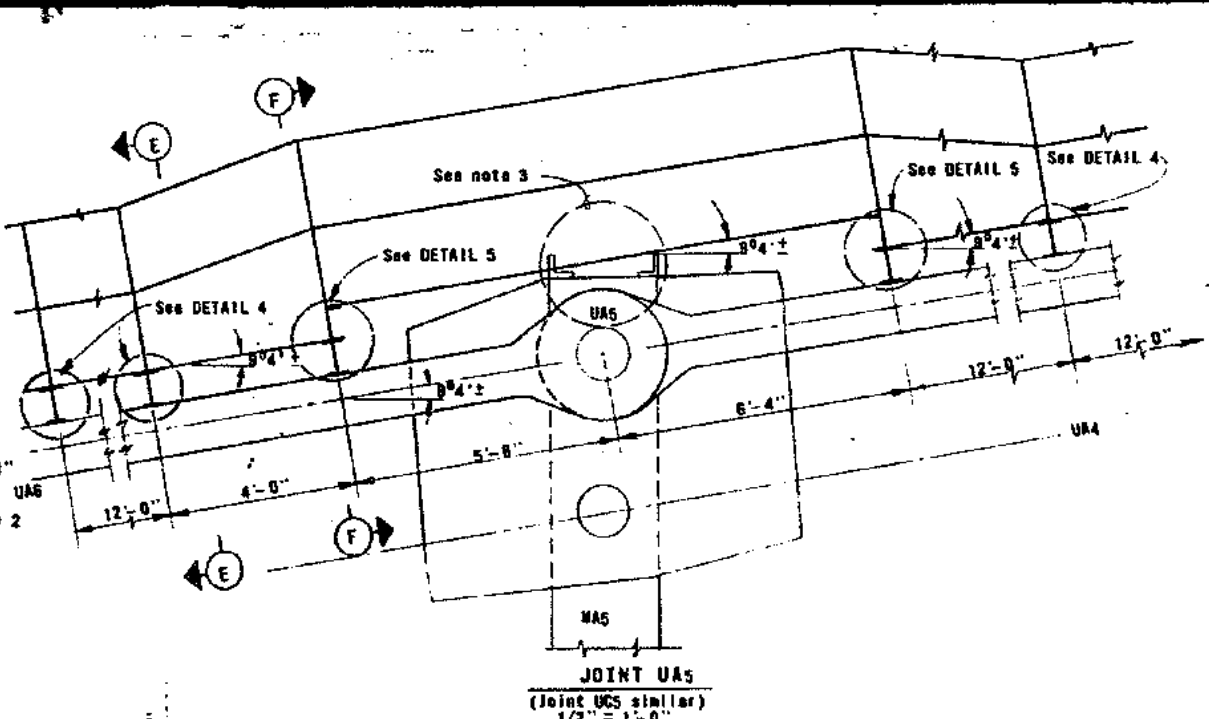
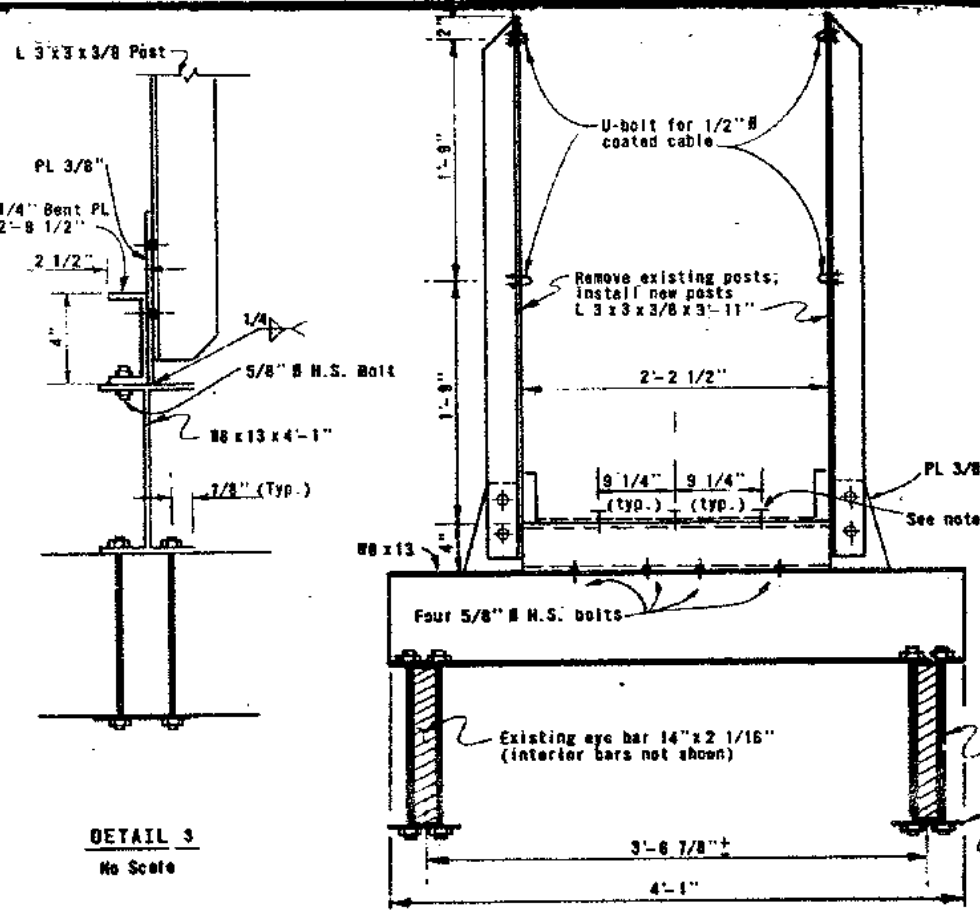
STRUCTURES - MAINT.
R. Kels
PROJECT MANAGER

BRIDGE NO.
33-25.34-03
POST MILE

SAN FRANCISCO - OAKLAND BAY BRIDGE
MAINTENANCE SAFETY IMPROVEMENTS
CANTILEVER SPANS WALKWAY DETAILS - 2

DATE	REVISION	BY	REASON
04	SF.Abr.	80	5/7/89.0.0/1.1

S. Larson C12732
 DATE APPROVED May 4, 1987

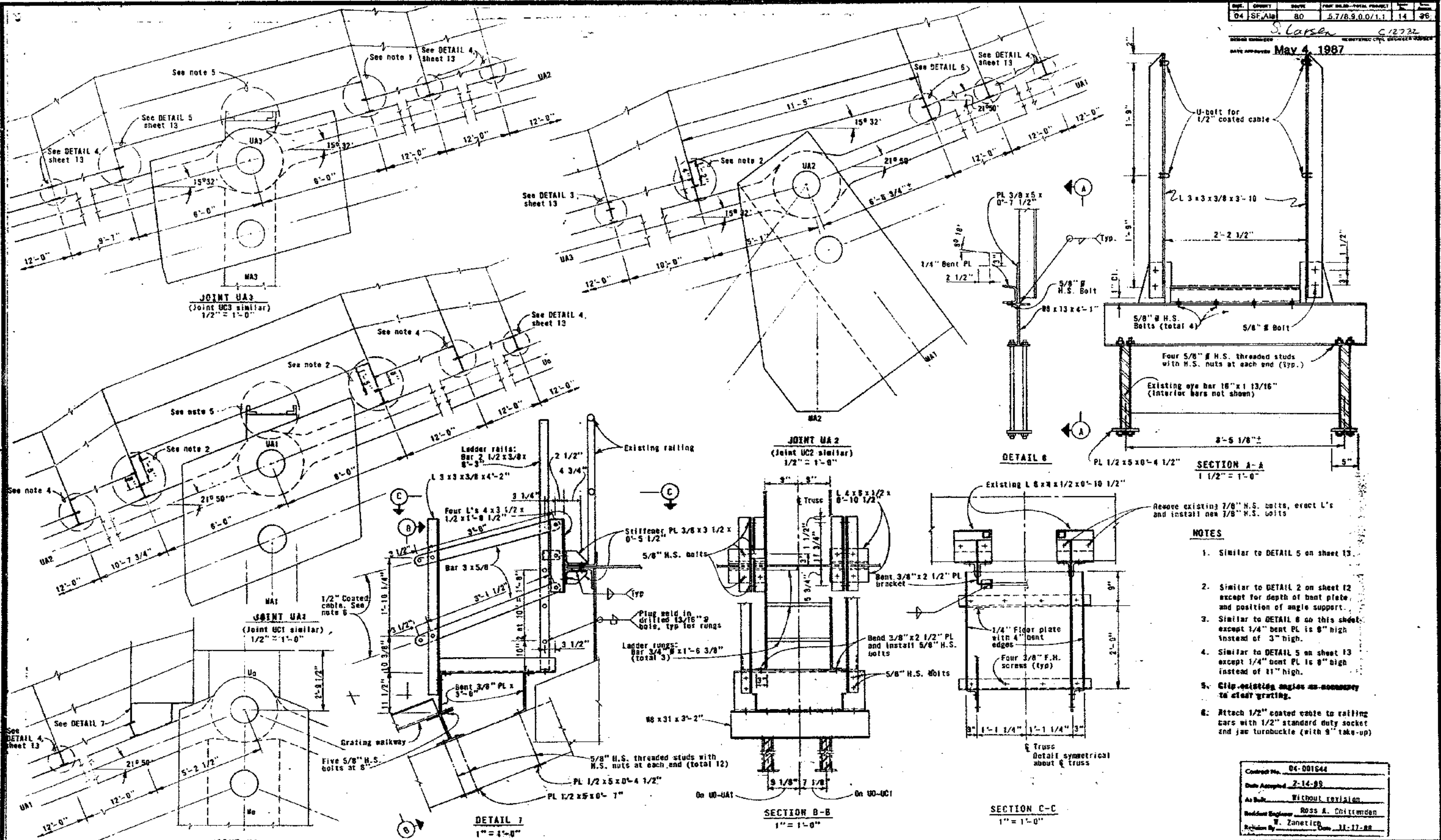


Contract No.	04-001644
Date Approved	2-14-89
As Built	Without revision
Resident Engineer	Ross A. Chittenden
Division By	W. Zaretsky
Date	11-17-88

- NOTES**
1. Walkway connection shall be 5/16" round head, square neck bolt (carriage bolt) with 10 ga. anchoring device, lock washer, and nut (3 connections per end of grating).
 2. Clip existing angles as necessary to clear grating.

DESIGN	BY J. Shih	CHECKED R. Keim	State of CALIFORNIA	BRIDGE NO.	33-25.34-03	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS CANTILEVER SPANS WALKWAY DETAILS - 3
DETAILS	BY J. Shih	CHECKED S. Larson	DEPARTMENT OF TRANSPORTATION	STRUCTURES - MAINT.	POST HOLE	
QUANTITIES	BY R. Keim	CHECKED		R. Keim		

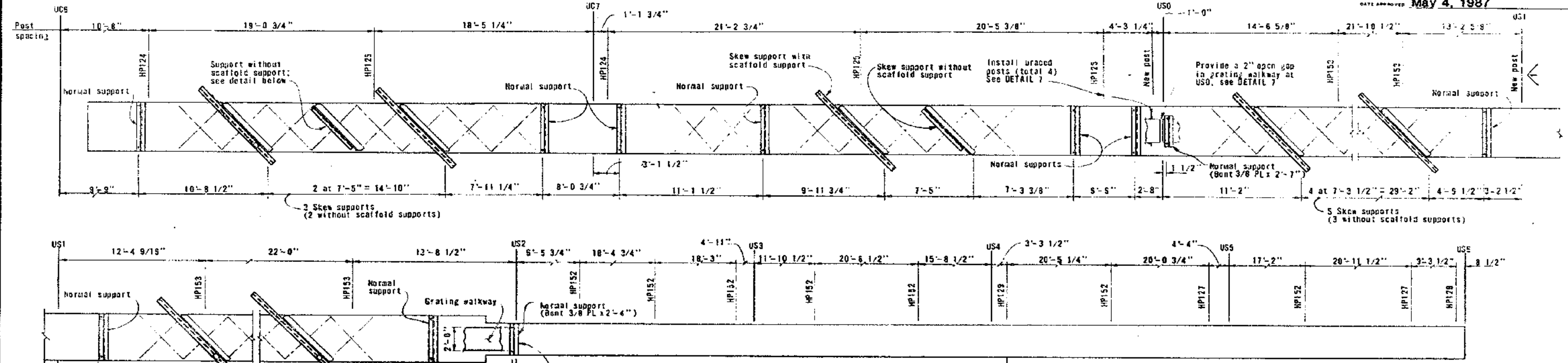
DESIGNED BY: S. Larsen
 DATE APPROVED: May 4, 1987
 PROJECT NO.: C-12732



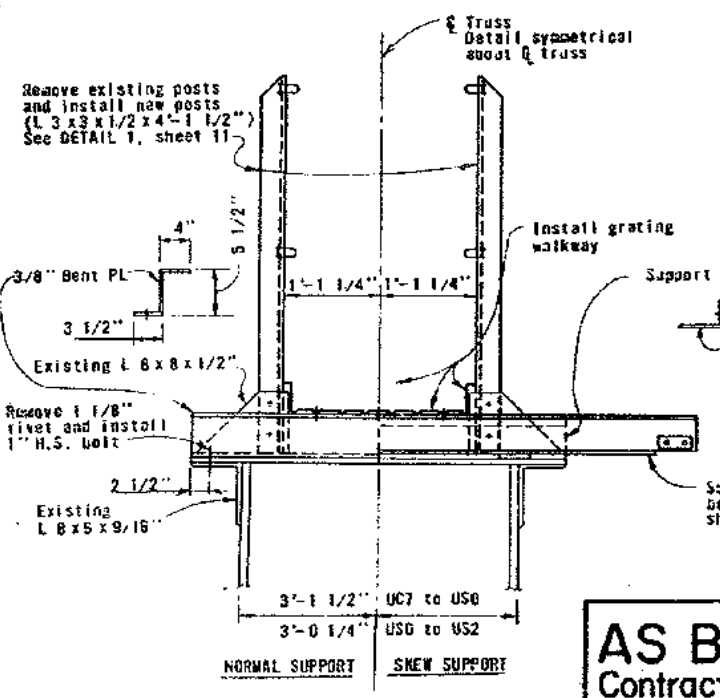
- NOTES**
1. Similar to DETAIL 5 on sheet 13.
 2. Similar to DETAIL 2 on sheet 12 except for depth of bent plate and position of angle support.
 3. Similar to DETAIL 6 on this sheet except 1/4" bent PL is 6" high instead of 3" high.
 4. Similar to DETAIL 5 on sheet 13 except 1/4" bent PL is 8" high instead of 21" high.
 5. Clip existing angles as necessary to clear grating.
 6. Attach 1/2" coated cable to railing bars with 1/2" standard duty socket and jaw turnbuckle (with 9" take-up).

Contract No.	04-001644
Date Approved	2-14-89
As Built	Without revision
Resident Engineer	Ross A. Chittenden
Revision By	W. Zanetich
Revision Date	31-17-88

DESIGN	By J. Shlah	Checked R. Keim	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES - MAINT. R. Keim	BRIDGE NO. 33-25, 34-03	POST MILE	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS CANTILEVER SPANS WALKWAY DETAILS - 4
DETAILS	By J. Shlah	Checked S. Larsen					
QUANTITIES	By R. Keim	Checked					



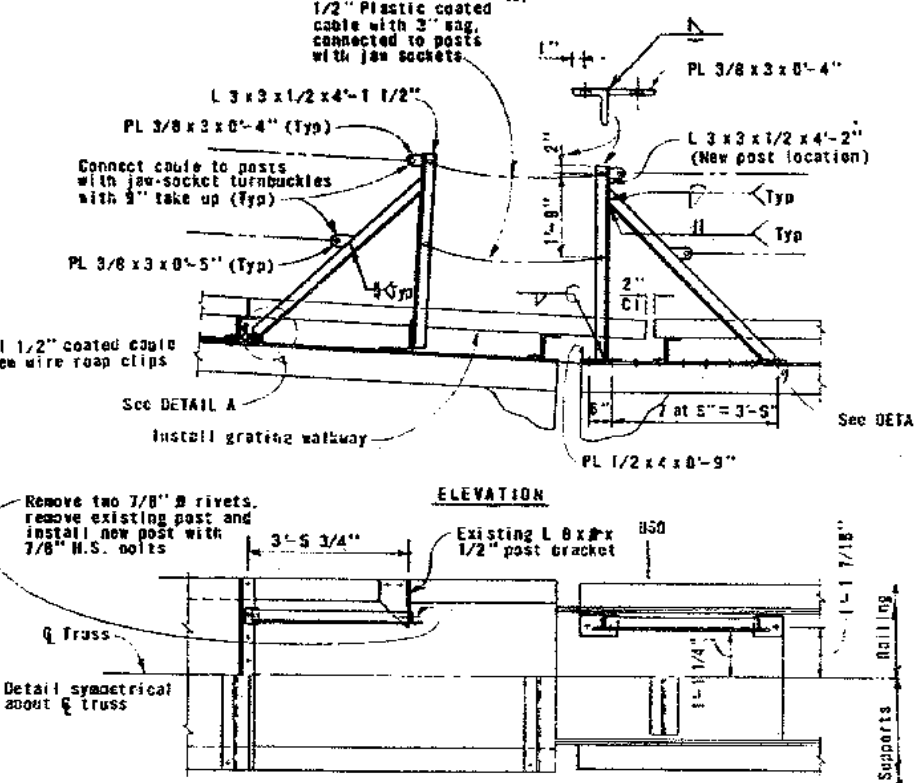
PLAN VIEW TOP CHORD
 No Scale



TYPICAL SECTION
 (Top chord north truss from UCS to US2)
 1" = 1'-0"

AS BUILT PLANS
 Contract No. 04-001644
 Date Completed 2-14-89
 Document No. _____

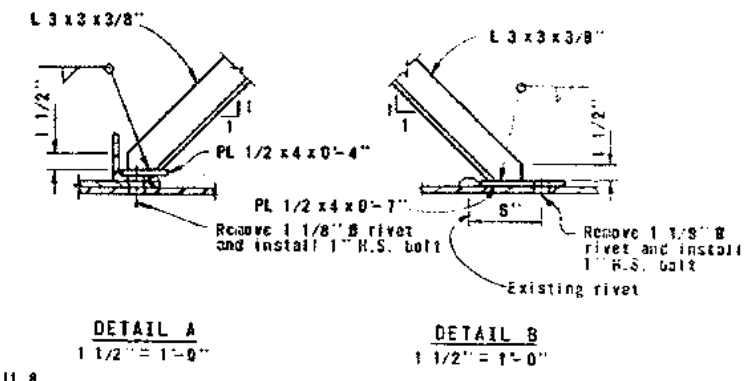
TYPICAL SECTION
 (Top chord north truss from US2 to US5)
 1" = 1'-0"



Note: Grating walkway not shown

PLAN

DETAIL 7
 1/2" = 1'-0"



NOTES

- Modify the existing railing and walkway grating on the south truss at US0 using details similar to those shown in DETAIL 7. Supply new post(s), post traces, grating walkway sections and walkway supports as needed.

Contract No.	04-001644
Date Accepted	2-14-1989
As Built	With revision
Resident Engineer	Ross A. Chittenden
Revision	Zanetich Dec 11-17-88

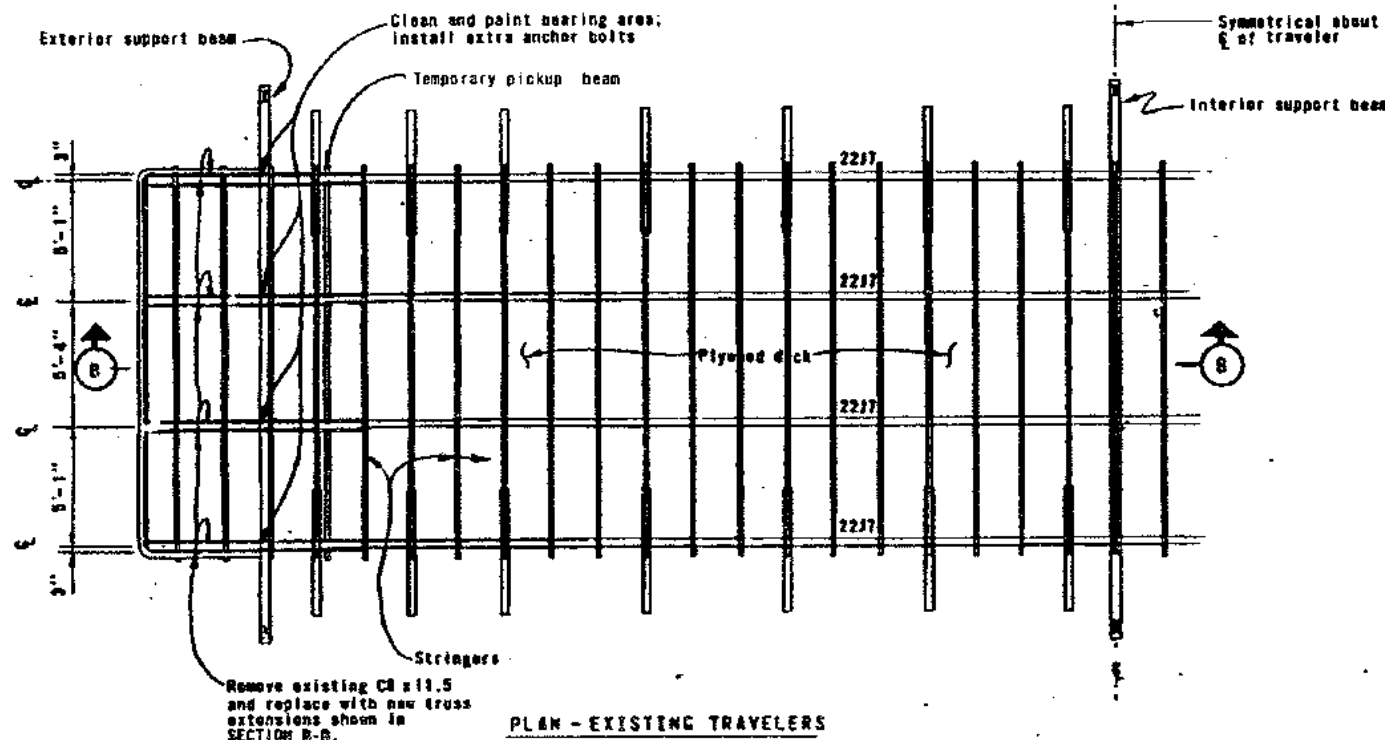
DESIGN	By R. Keim	Checked S. Larsen
DETAILS	By J. Wong	Checked R. Keim
QUANTITIES	By R. Keim	Checked

State of
CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

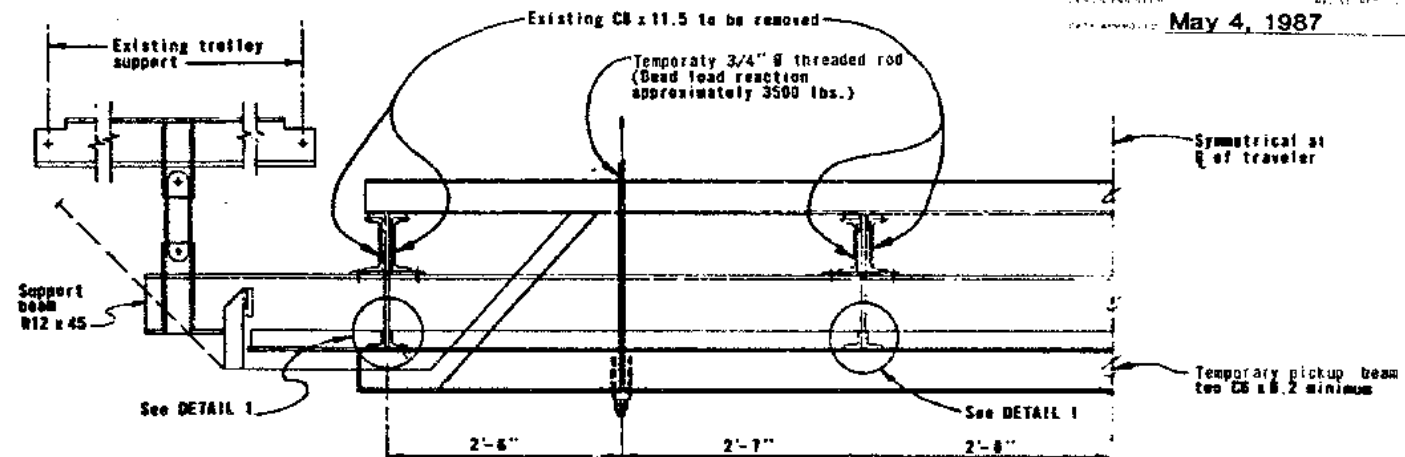
STRUCTURES - MAINT.
 R. Keim
 PROJECT ENGINEER

BRIDGE NO.	33-25, 34-03
POST MILE	

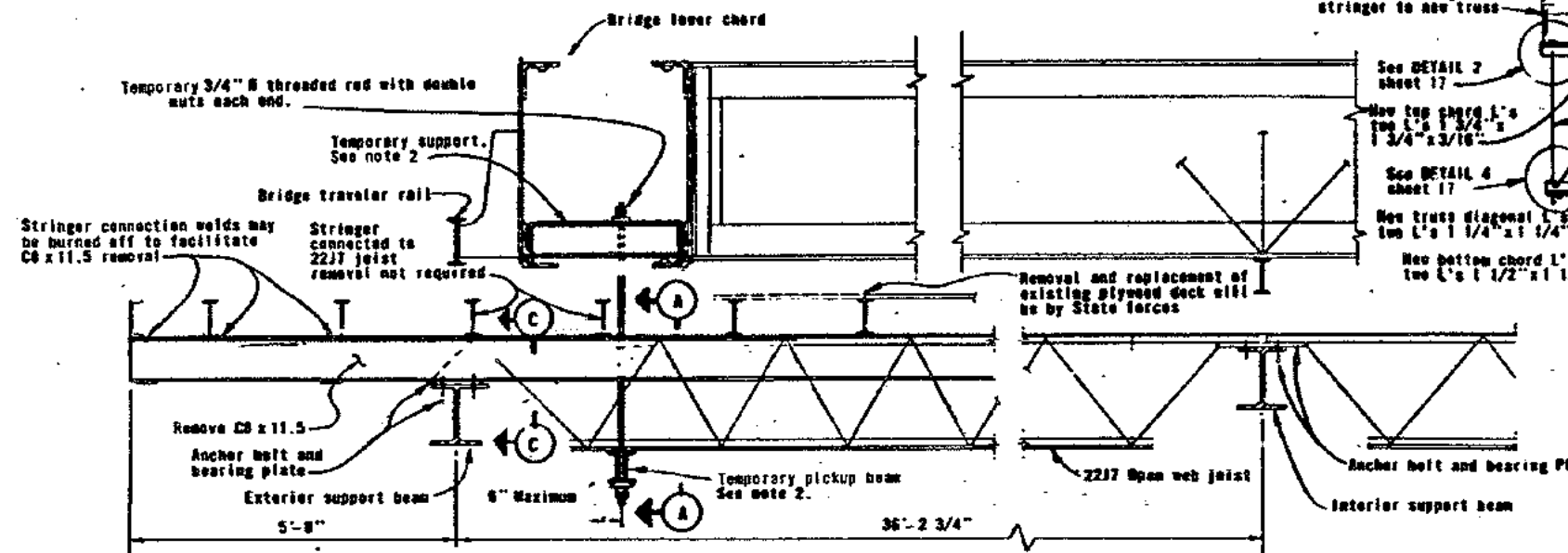
SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 CANTILEVER SPANS WALKWAY DETAILS - C



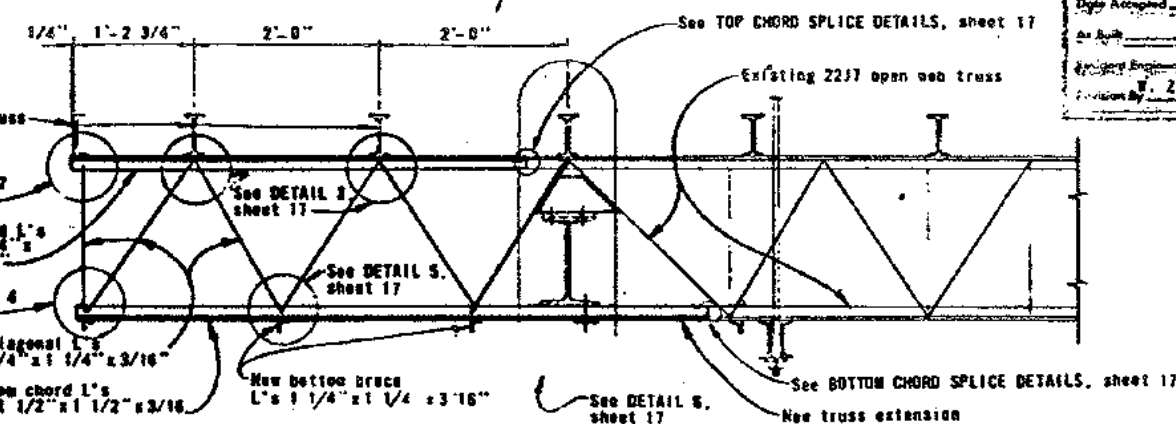
PLAN - EXISTING TRAVELERS
 (One half shown, other half opposite hand)
 No Scale



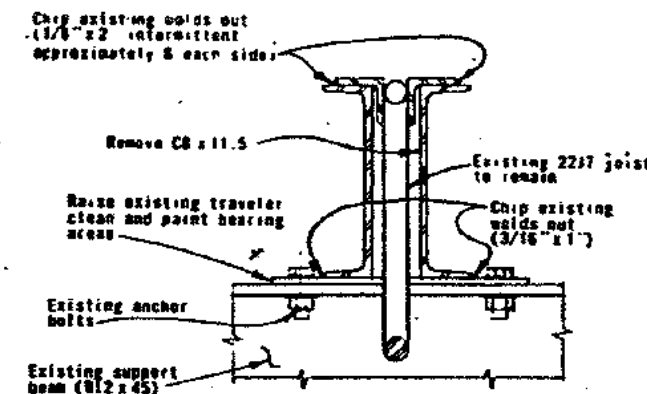
SECTION A-A



SECTION B-B REMOVAL DETAILS
 No Scale



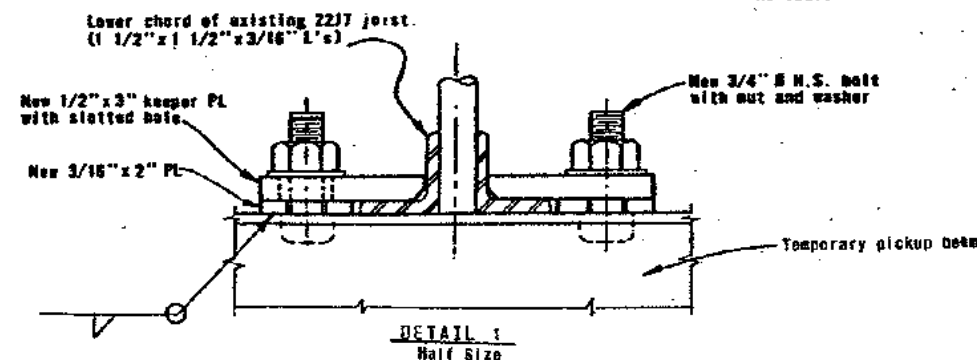
SECTION B-B REPLACEMENT DETAILS
 See Notes



SECTION C-C
 3" = 1'-0"

NOTES

- Contractor may substitute manufactured open web joists 2217 for built-up truss extensions shown.
- The method shown for picking up the traveler for the purpose of cleaning the bearings is illustrative. The Contractor may submit his own methods to the Engineer for approval.
- REPAIR SEQUENCE**
 - Install pickup assembly on one side of the traveler; loosen, but do not remove anchor bolts on the bearing plates located at both the exterior and interior support beams.
 - Pick traveler a maximum of 2 inches off the exterior support beam. Clean and paint the contact surface of the exterior bearing.
 - Lower traveler back on bearing and tighten anchor bolts.
 - With pickup assembly left in place, proceed to remove and repair scaffold as shown.
 - Repeat steps (a) to (d) on the opposite side of the traveler.
 - Remove pickup assembly from bridge upon completion of repairs.



DETAIL 1
 Half Size

AS BUILT PLANS
 Contract No. **04-001644**
 Date Completed **2-14-89**
 Document No. _____

DESIGN	By J. Yee	Checked R. Bridwell
DETAILS	By D. Pringle	Checked J. Yee
QUANTITIES	By J. Yee	Checked

State of
CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

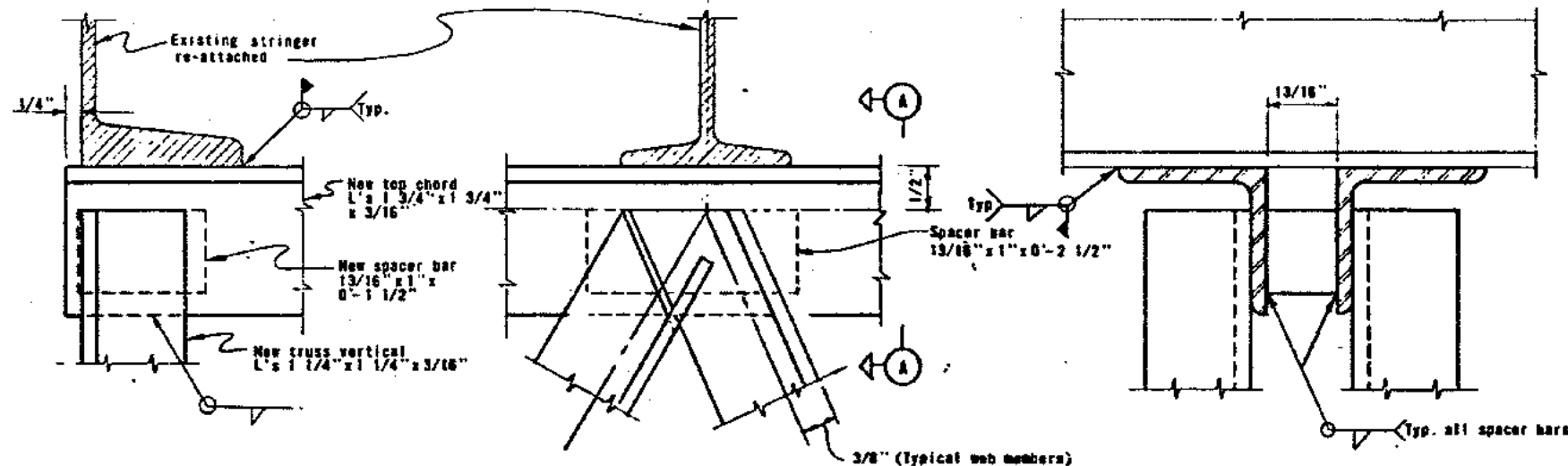
STRUCTURES - MAINT.

J. Yee

BRIDGE NO.
 33-25.34/03
 POST MILE

SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS

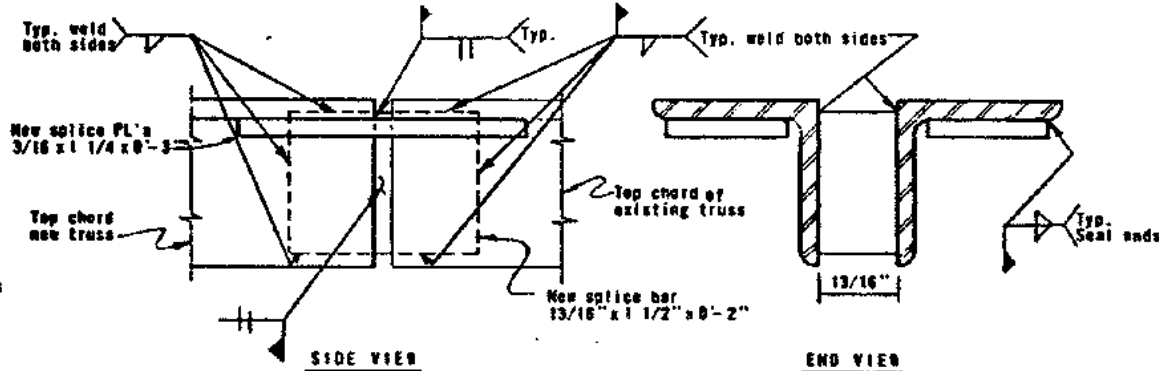
WEST BAY LOWER DECK TRAVELER MODIFICATIONS - 1



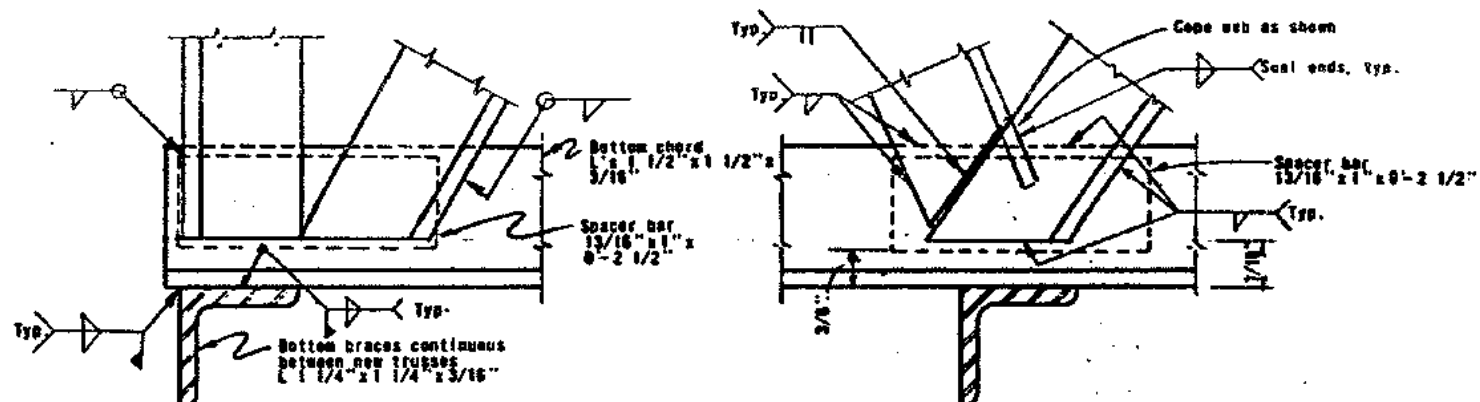
DETAIL 2

DETAIL 3

VIEW A-A

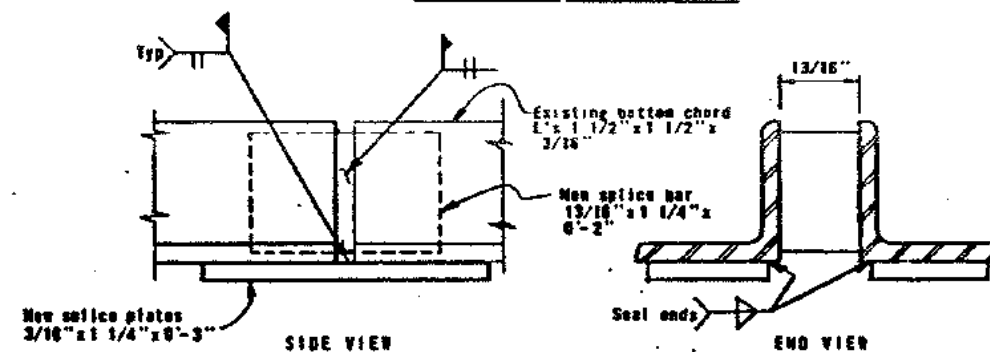


TOP CHORD SPLICE DETAILS

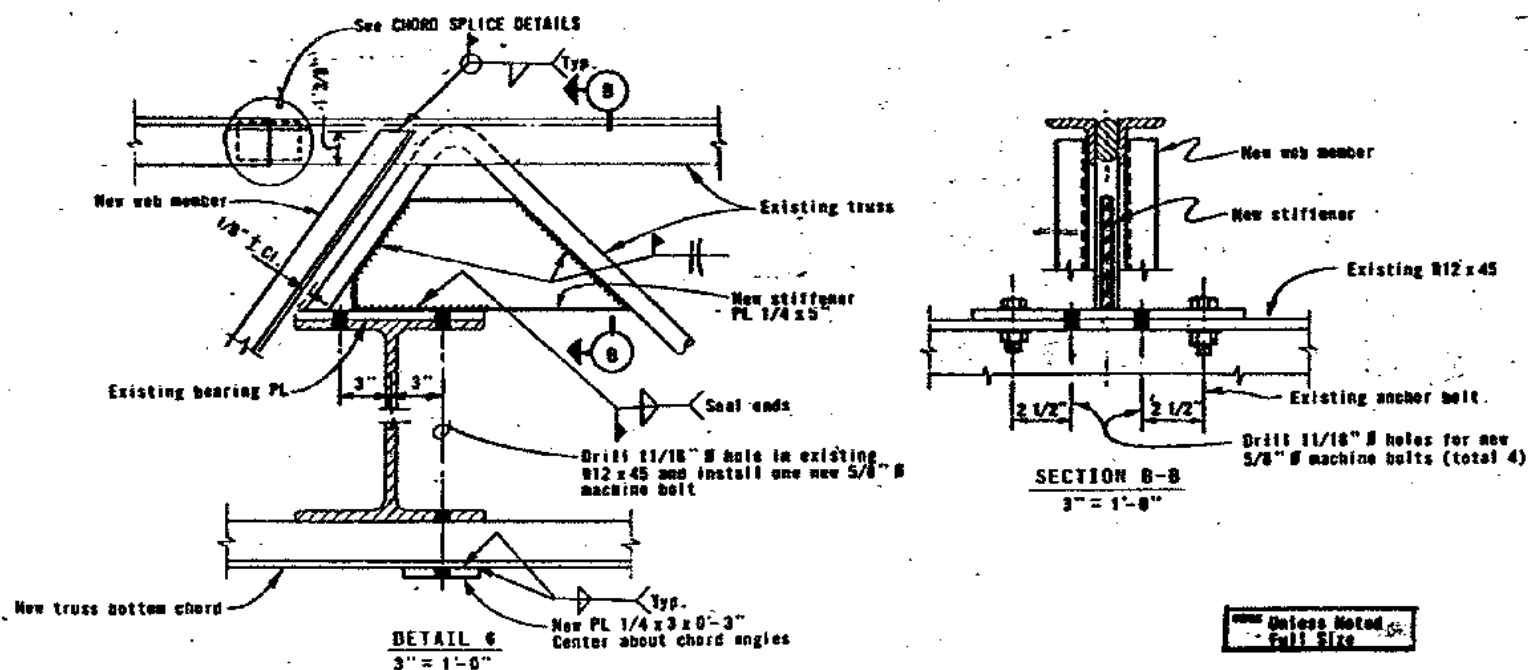


DETAIL 4

DETAIL 5



BOTTOM CHORD SPLICE DETAILS



DETAIL 6

SECTION B-B

Unless Noted Full Size

NOTES

1. See notes on sheet 16.
2. For location of DETAILS 2 thru 6, and TOP AND BOTTOM CHORD SPLICE DETAILS see SECTION B-B on sheet 15.

AS BUILT PLANS
Contract No. 04-001644
Date Completed 2-14-89
Document No.

Contract No. 04-001644
Date Accepted 2-14-89
As Built Without revision
Resident Engineer Ross A. Chittenden
Revision By W. Zanetti 11-17-88

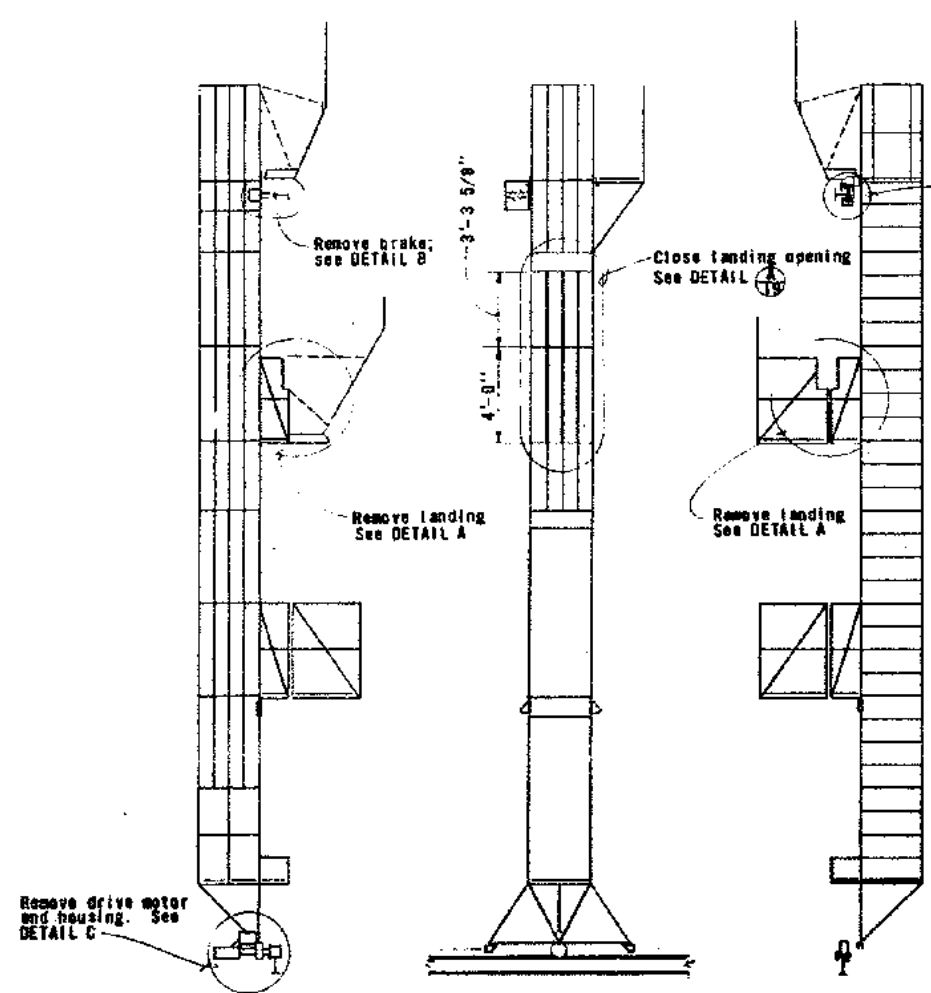
DESIGN	By J. Yee	Checked R. Bridwell
DETAILS	By D. Pringle	Checked J. Yee
QUANTITIES	By J. Yee	Checked

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STRUCTURES - MAINT.
J. Yee
PROJECT ENGINEER

BRIDGE NO. 33-25.34-03
POST MILE

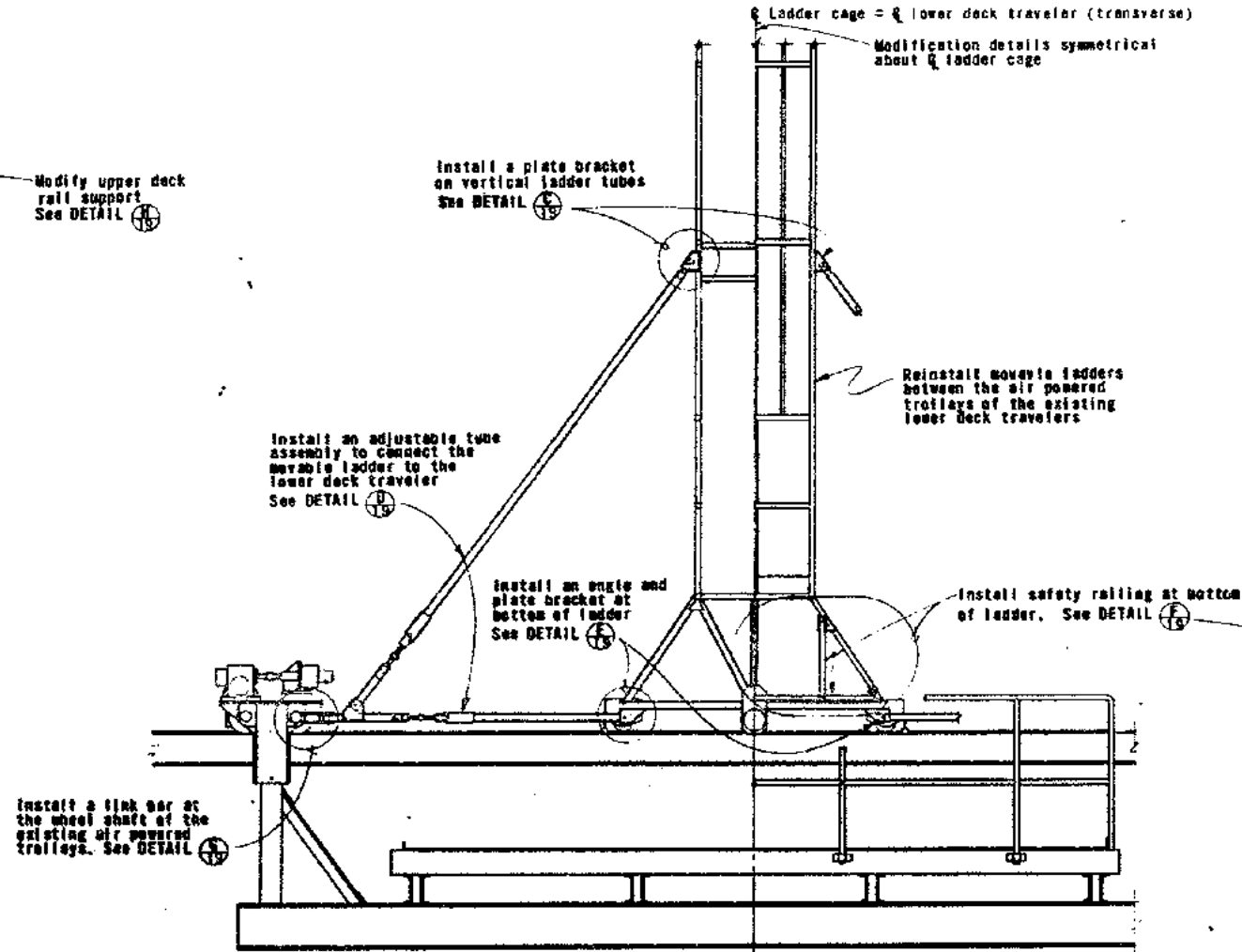
SAN FRANCISCO - OAKLAND BAY BRIDGE
MAINTENANCE SAFETY IMPROVEMENTS
WEST BAY LOWER DECK TRAVELER MODIFICATIONS - 2



NON CLIMBING SIDE
(Type "E" shown at north side of bridge)

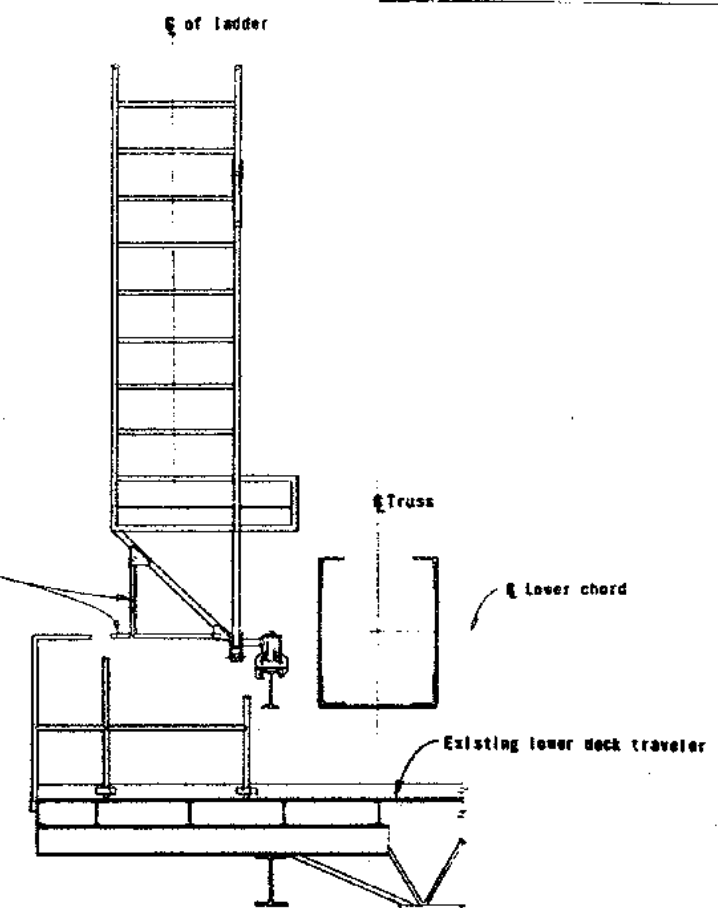
ROADSIDE ELEVATION

CLIMBING SIDE
(Type "D" shown at south side of bridge)



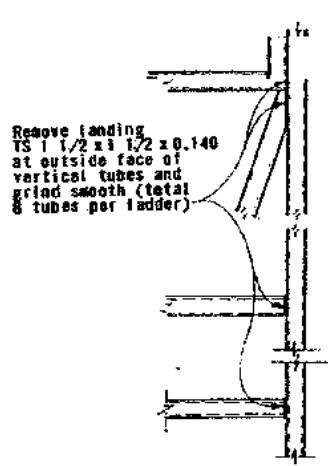
PART SECTION
(At E of ladder)

PART ELEVATION
(Looking toward bridge)

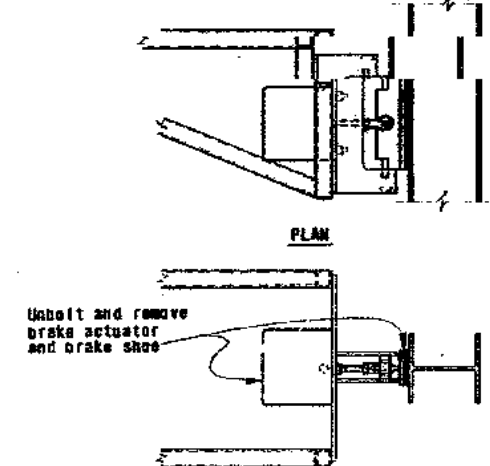


END VIEW

MOVABLE LADDER VIEWS
(Types C thru F shown. Types A and B similar)
1/4" = 1'-0"

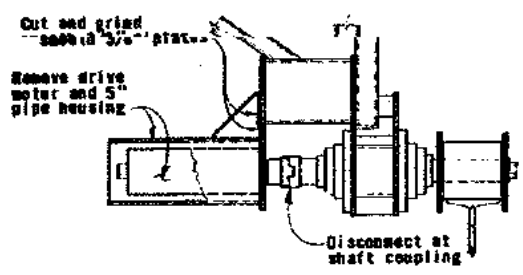


DETAIL A



DETAIL B
(One per ladder)

REMOVAL DETAILS
1 1/2" = 1'-0"



DETAIL C

REINSTALLATION DETAIL
(Movable ladder reinstalled at lower deck traveler)
1/2" = 1'-0"

LOCATION AND TYPE OF EXISTING MOVABLE LADDERS		
TYPE	SIDE RUNGS LOCATED	PRESENT LOCATION
C	East	1 each in Spans W1, W2, W3, W4, W5 and W6; south side
D	West	Same as Type C
E	East	1 each in Spans W1, W2, W3, W4, W5 and W6; north side
F	West	Same as Type E
A,B	East - West Respectively	South and North sides - S.F. Anchorage to W1

NOTES

- For relocated positions of movable ladders see sheet 2.
- For the sixteen movable ladders that are to be relocated to the ends of the trusses, remove landing and close landing opening as shown in DETAIL A, prior to installing ladders in new locations.

AS BUILT PLANS
Contract No. 04-001844
Date Completed 2-14-89
Document No.

Contract No.	04-001844
Date Accepted	2-14-89
As Built	With revision
Resident Engineer	Ross A. Chittenden
Revision By	U. Zanetti
	11-17-88

DESIGN	By R. Keim	Checked S. Larsen
DETAILS	By R. Keim	Checked S. Larsen
QUANTITIES	By R. Keim	Checked

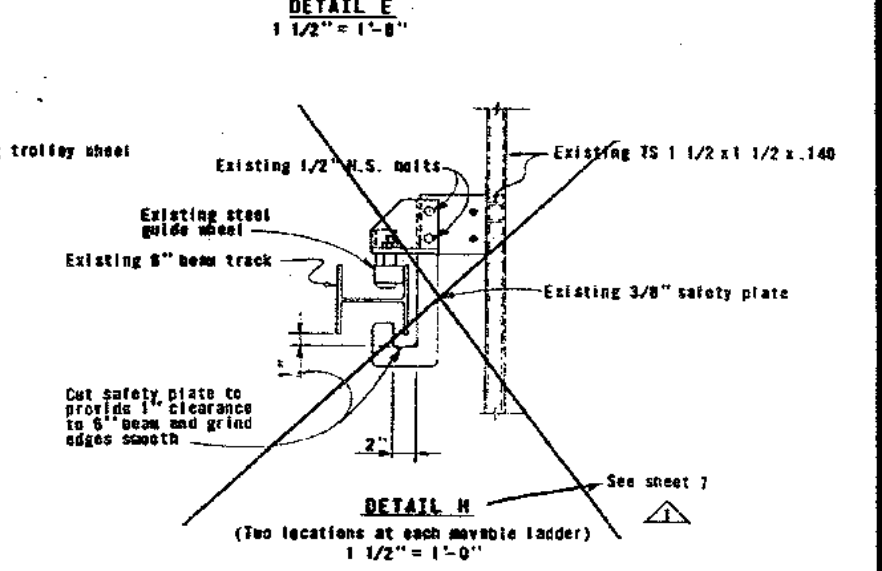
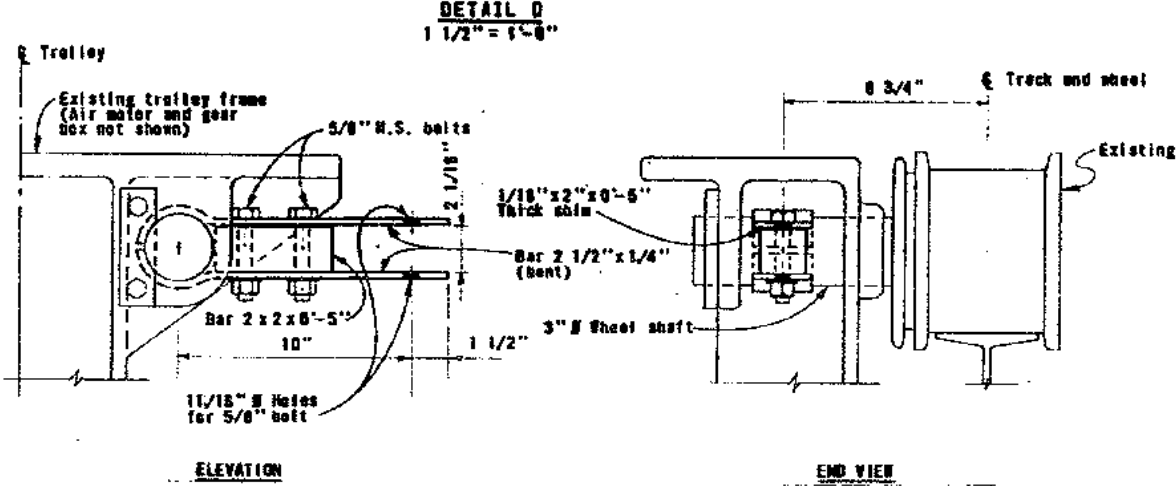
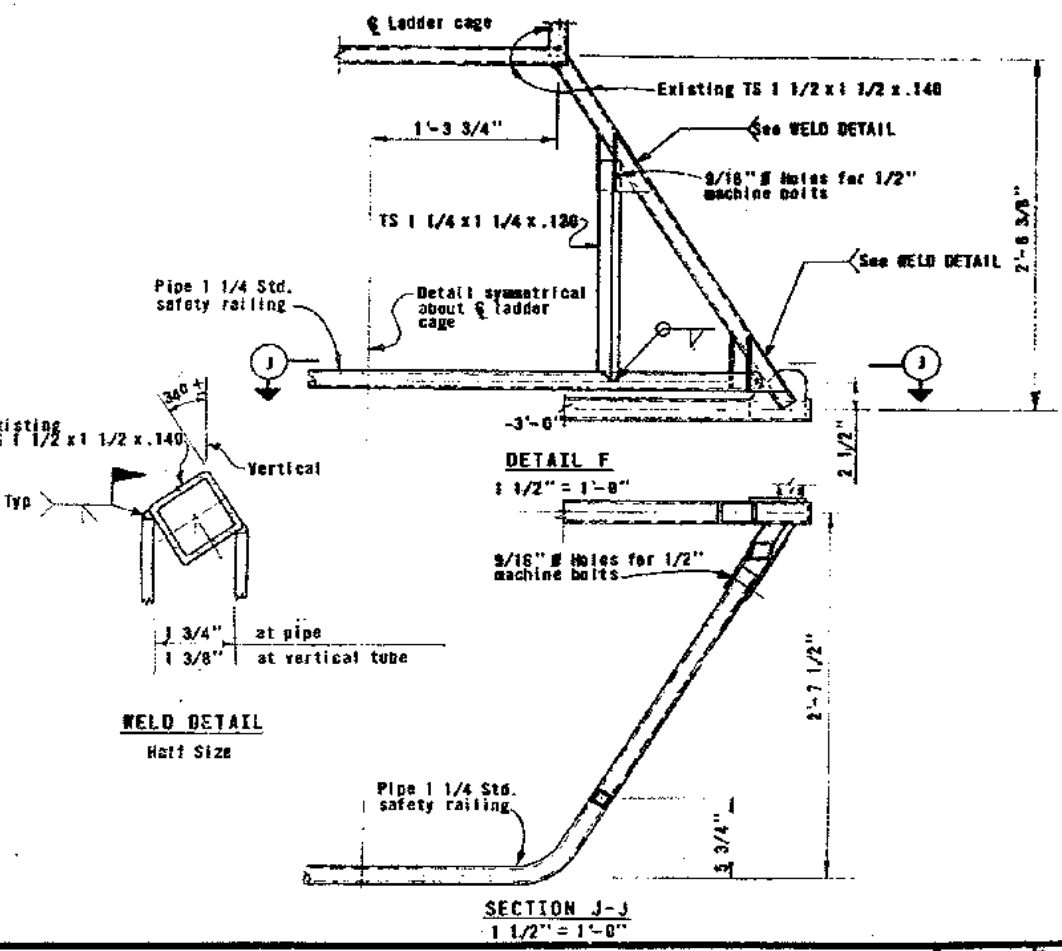
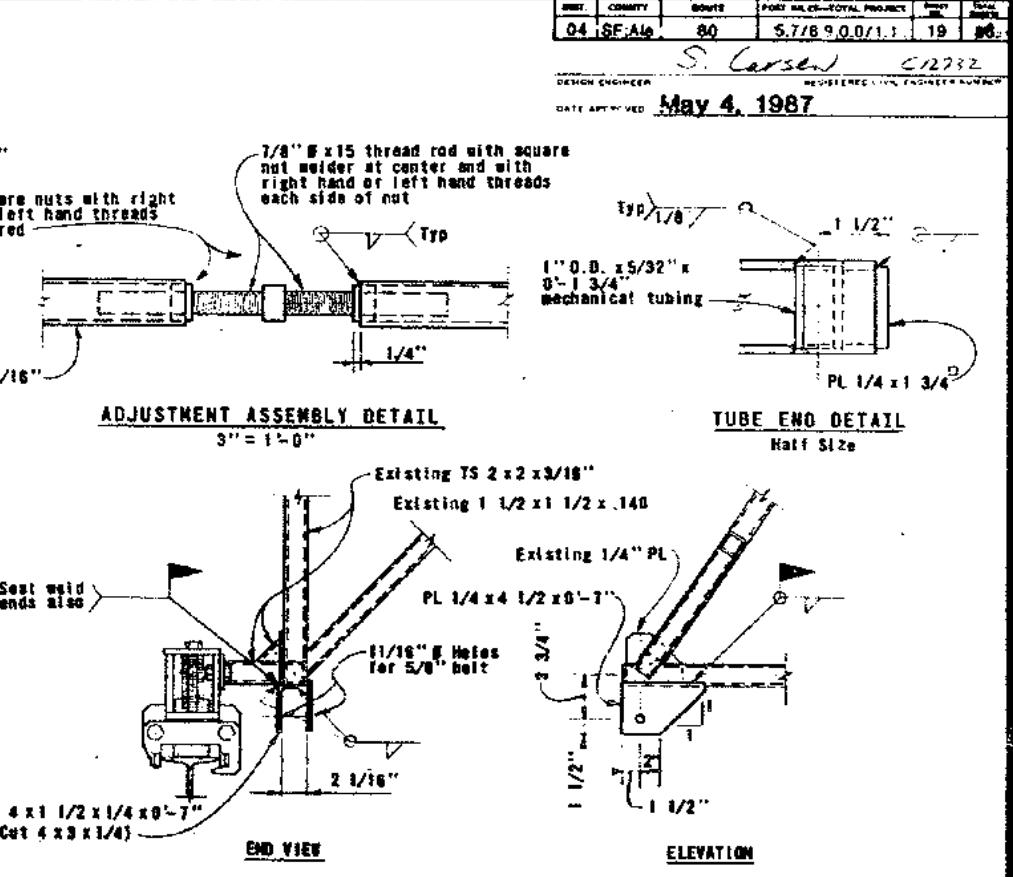
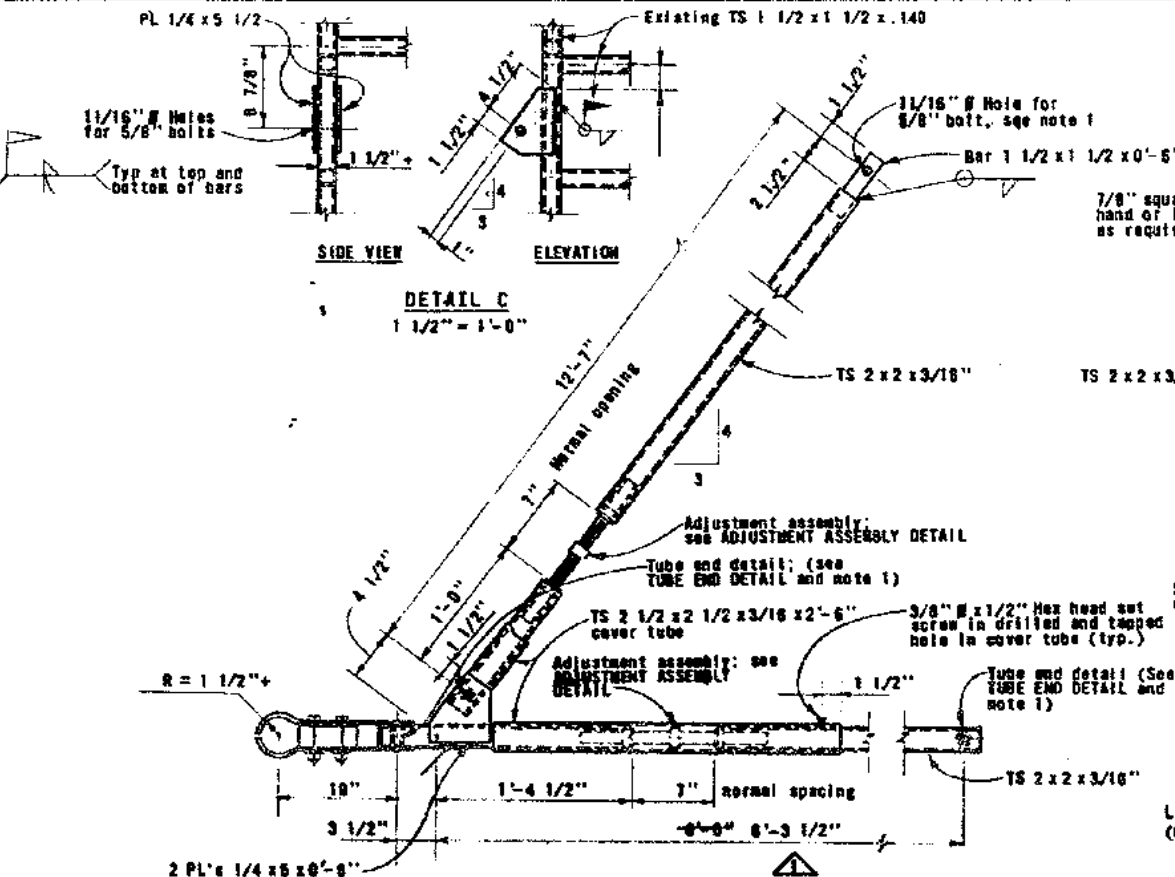
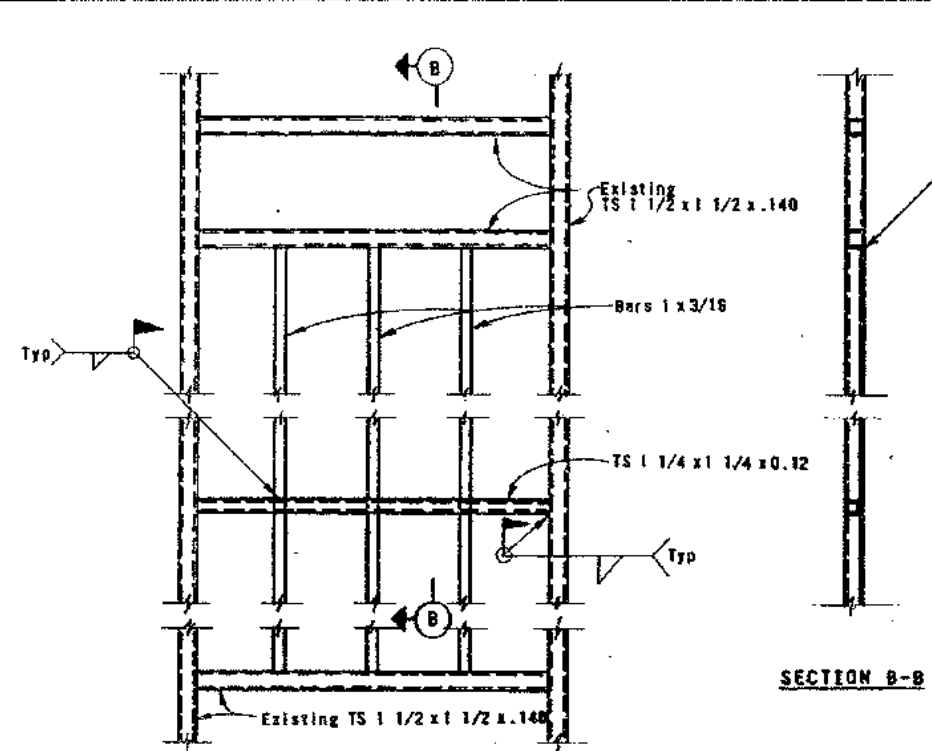
State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STRUCTURES - MAINT.

BRIDGE NO.
33-25, 34-03
POST MILE

SAN FRANCISCO - OAKLAND BAY BRIDGE
MAINTENANCE SAFETY IMPROVEMENTS

MOVABLE LADDER MODIFICATIONS-1



WELD DETAIL
 Half Size

AS BUILT PLANS
 Contract No. *04-001644*
 Date Completed *2-14-89*
 Document No.

NOTES

- Install 5/8" machine bolts to connect the adjustable tube assemblies to the existing movable ladders and lower deck traveler trolleys. Bolts shall be supplied with slotted nuts and cotter pins.

Contract No.	04-001644
Date Accepted	2-14-89
As Built	With revision
Resident Engineer	Ross A. Chittenden
Checked By	W. Zanetich
Date	11-17-88

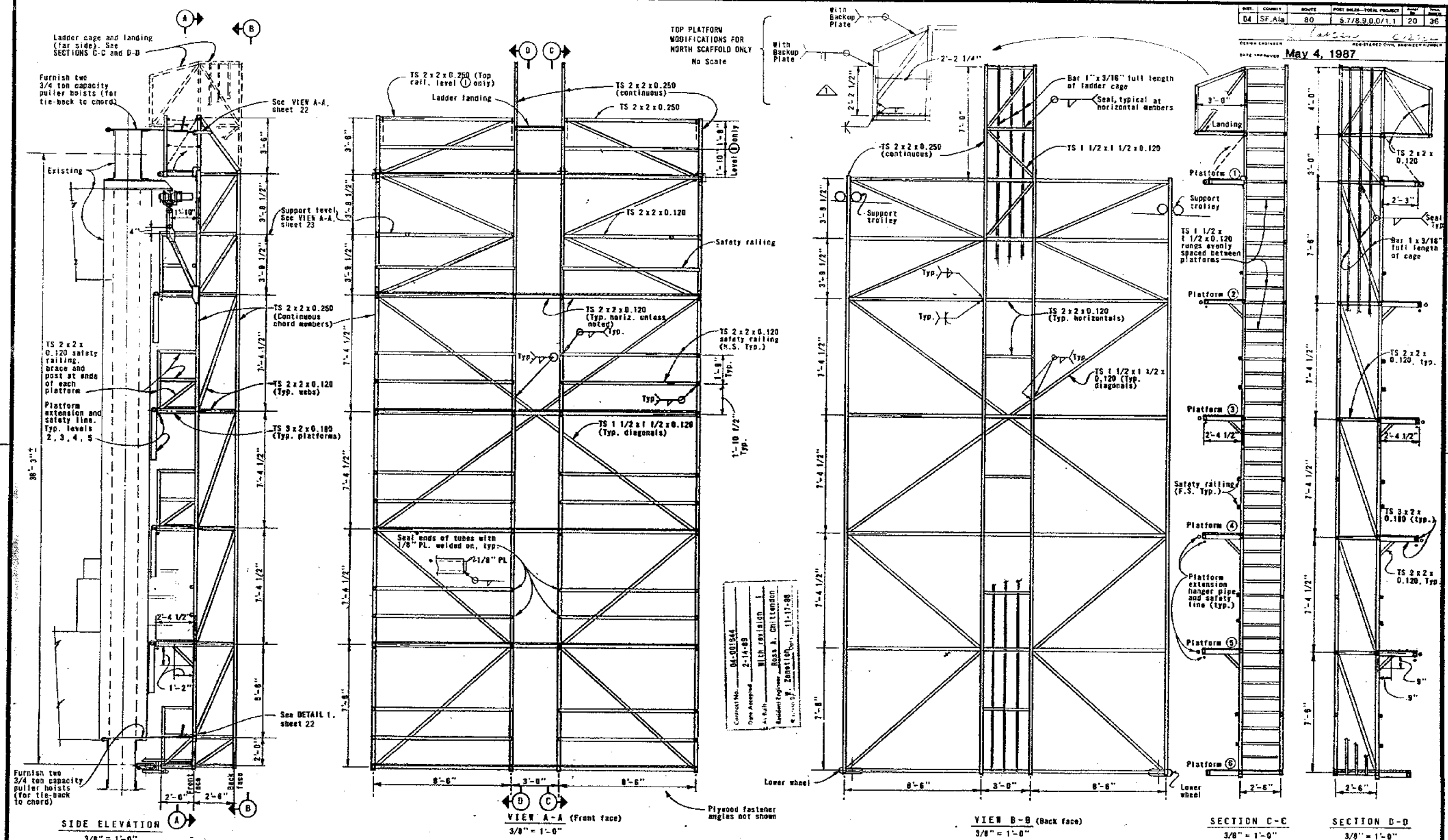
DESIGN	By R. Keim	Checked S. Larsen
DETAILS	By R. Keim	Checked S. Larsen
QUANTITIES	By R. Keim	Checked

State of CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

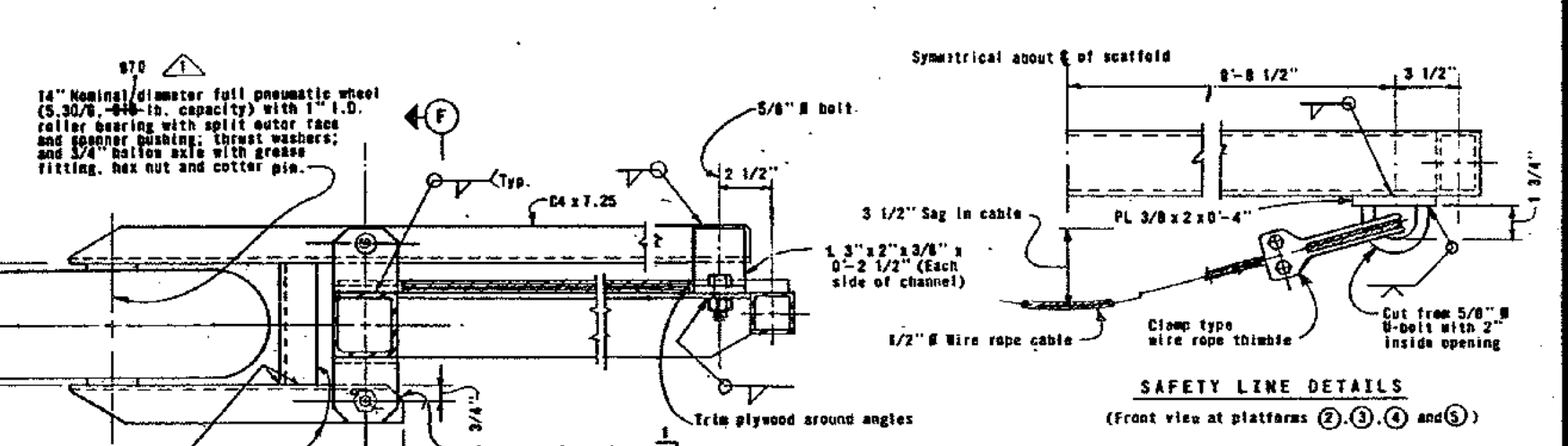
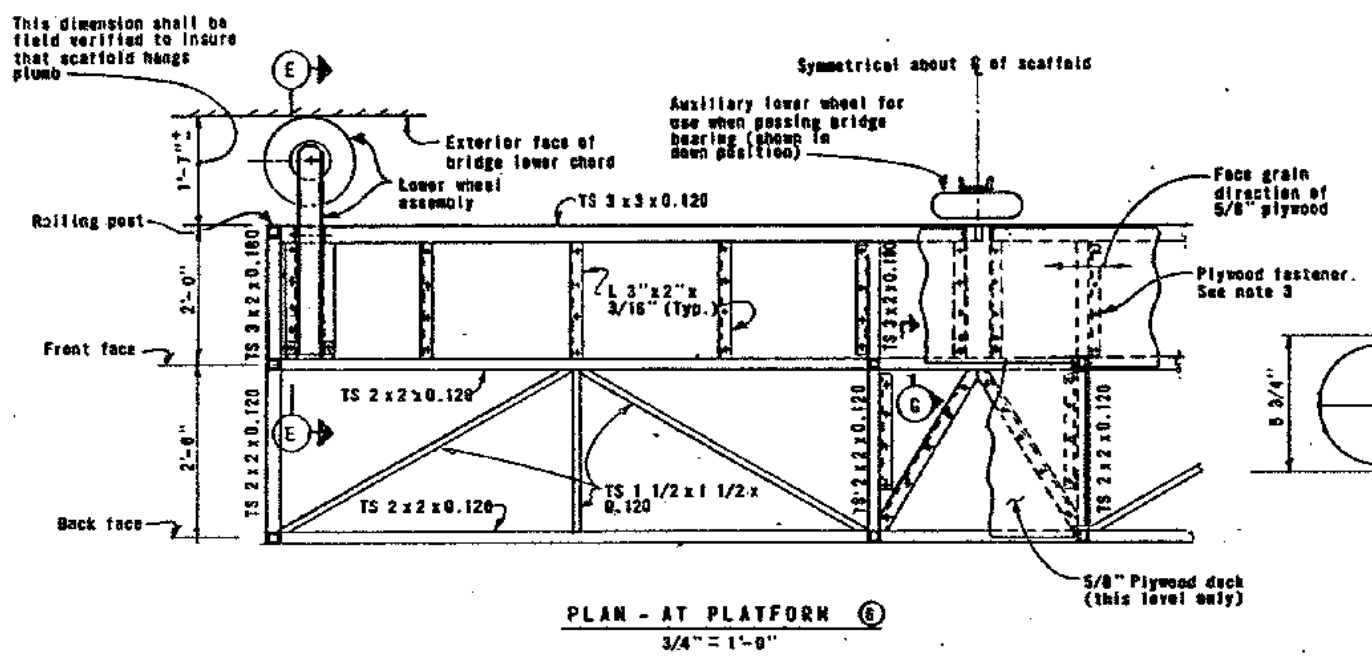
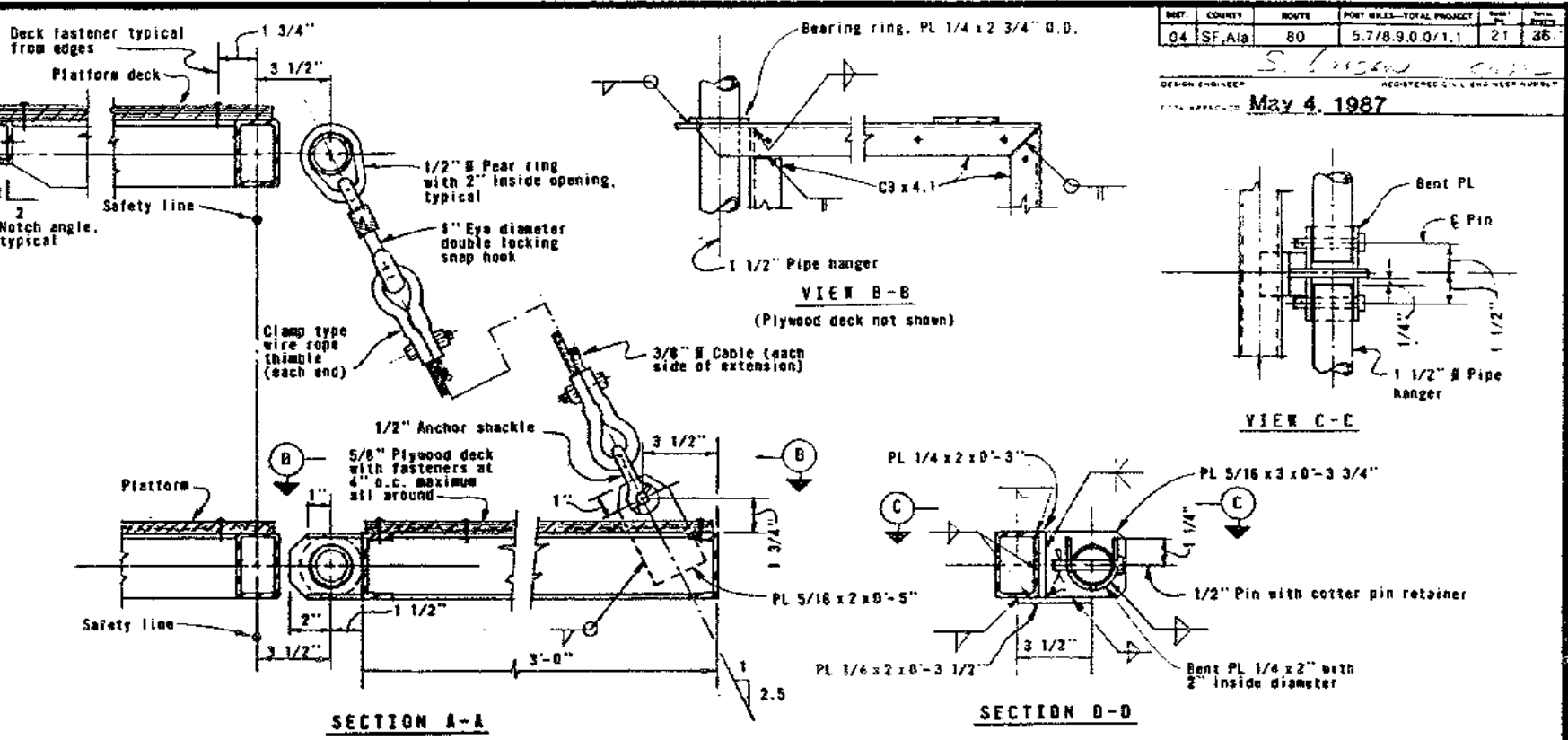
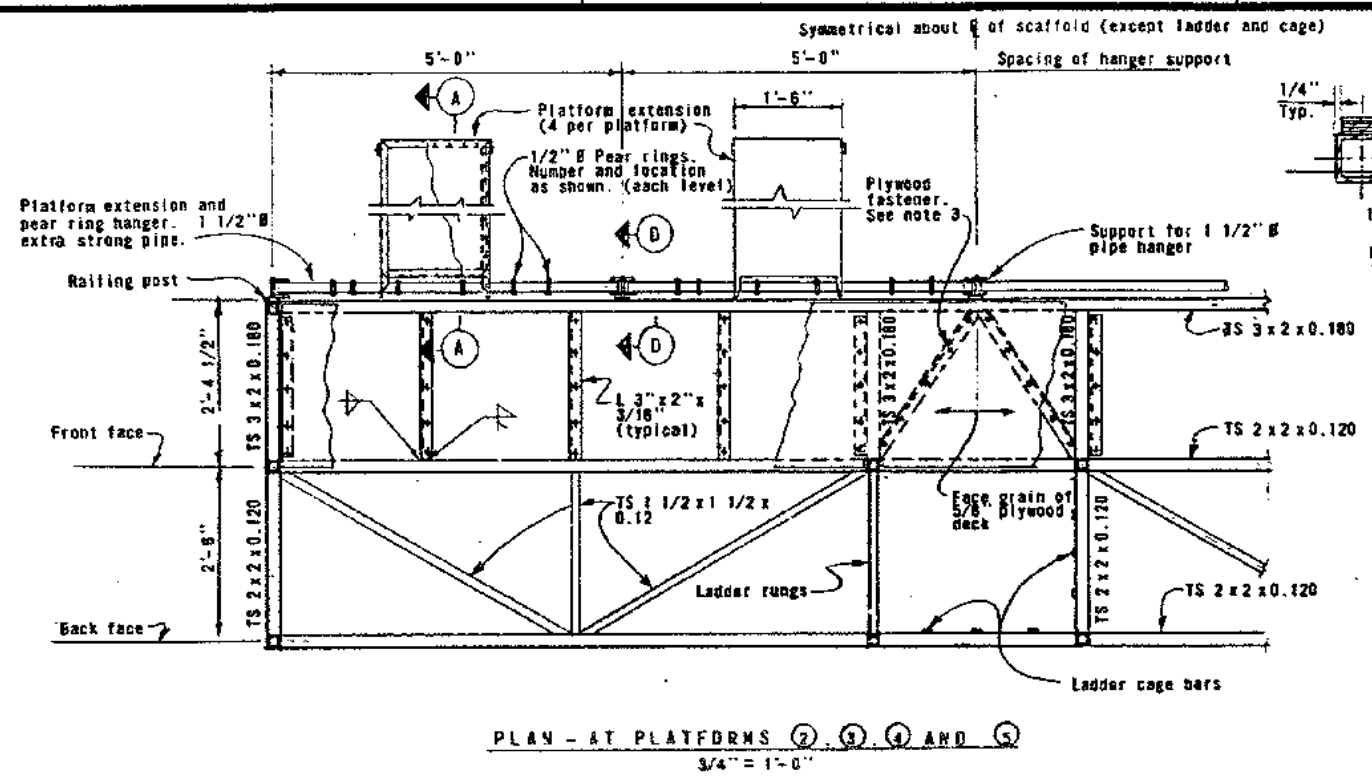
STRUCTURES - MAINT.
 E. Keim
 PROJECT ENGINEER

BRIDGE NO.
 33-25,34-03
 POST MILE

SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 MOVABLE LADDER MODIFICATIONS - 2



			DESIGN By <i>John M. Yee</i> Checked <i>R. H. White</i>	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES - MAINT. J. Yee PROJECT ENGINEER	BRIDGE NO. 33-25, 34-03	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS		
			DETAILS By <i>J. Yee</i> Checked <i>R. H. White</i>			POST MILE		TRUSS WEB SCAFFOLD DETAILS - 1	
			QUANTITIES By <i>R. H. White</i> Checked <i>R. H. White</i>						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3			CU 04 333 WO 001841	Disregard prints bearing earlier revision dates	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 28 OF 28



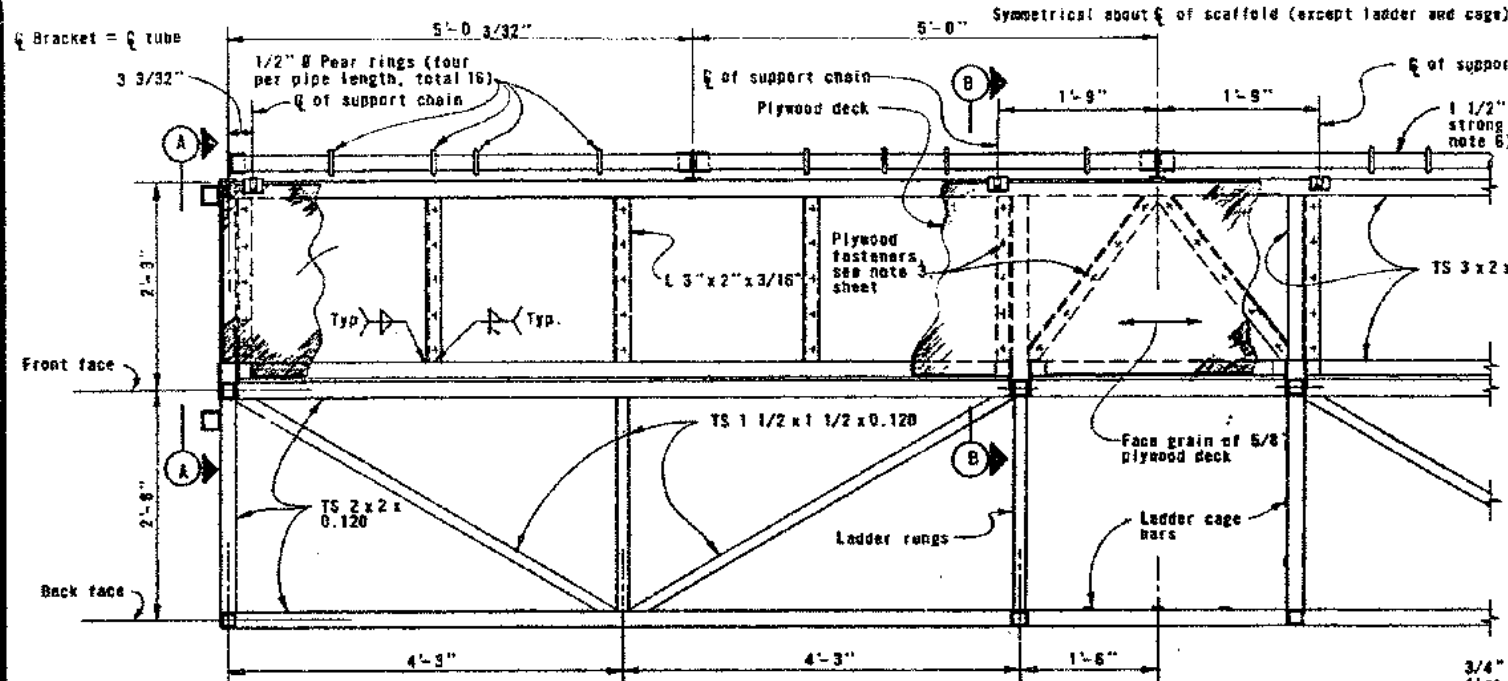
- NOTES**
1. Unless noted, all details shown are on 3 inch equal to one foot scale.
 2. Unless otherwise shown, all connections are continuously welded with 3/16" weld.
 3. 5/8" plywood decking shall be fastened to 3x2 angles at places indicated with #10-24 Type F pan head self-tapping screws.

SCAFFOLD DESIGN LOADS	
Dead Load	10,700 ^{lb}
Live Load (Spread uniformly over scaffold)	2,500 ^{lb}

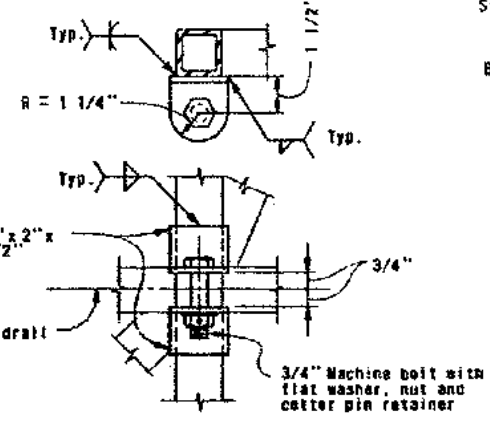
AS BUILT PLANS
 Contract No. 04-001644
 Date Completed 2-14-89
 Document No.

Contract No. 04-001644
 Date Accepted 2-14-89
 With revision 1
 As Built
 Resident Engineer: Ross Chittenden
 Designer: B. Zanetich
 Date: 11-17-88

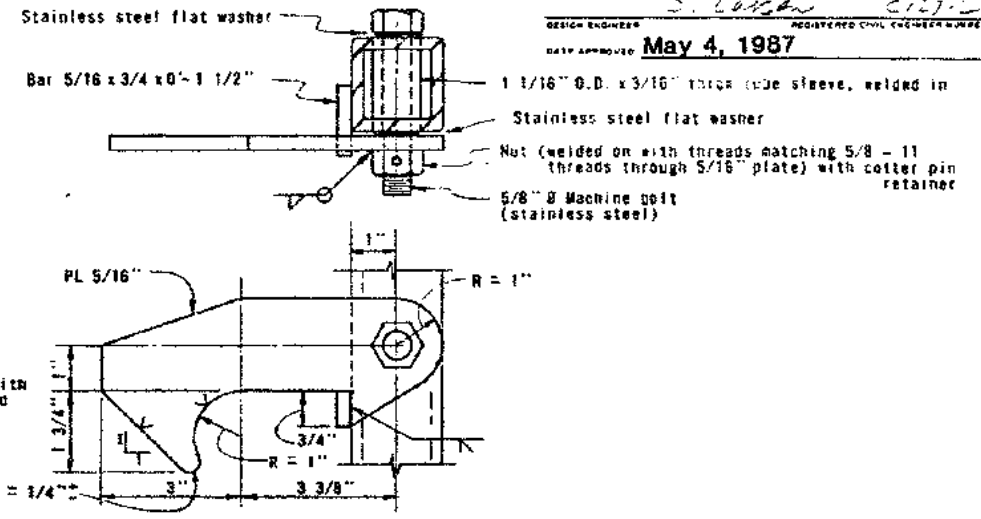
DESIGN ENGINEER: *S. L. ...*
 DATE APPROVED: **May 4, 1987**
 REGISTERED CIVIL ENGINEER NUMBER: *...*



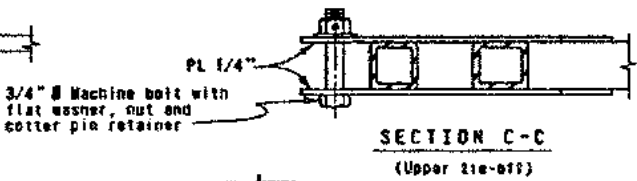
PLAN - AT PLATFORM ①
 Scale: 1" = 1'-0"



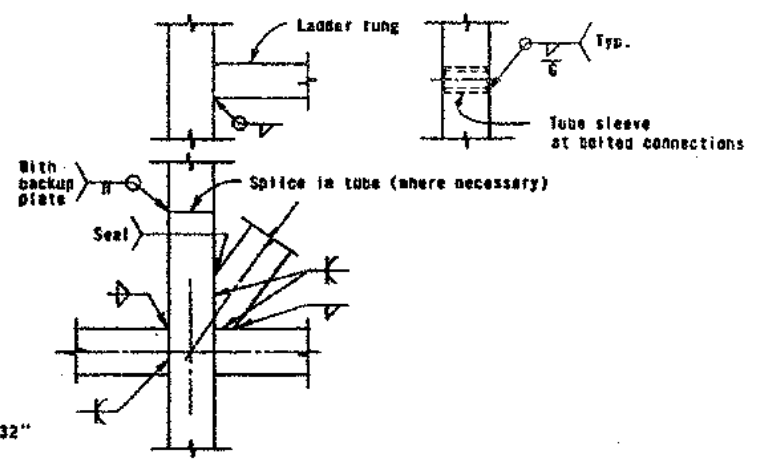
DETAIL 1 - LOWER TIE-OFF
 Total 2 per scaffold
 See sheet 20 for location



DETAIL 2 - LOCKING DEVICE
 One as shown; one opposite hand
 Scale: 8" = 1'-0"

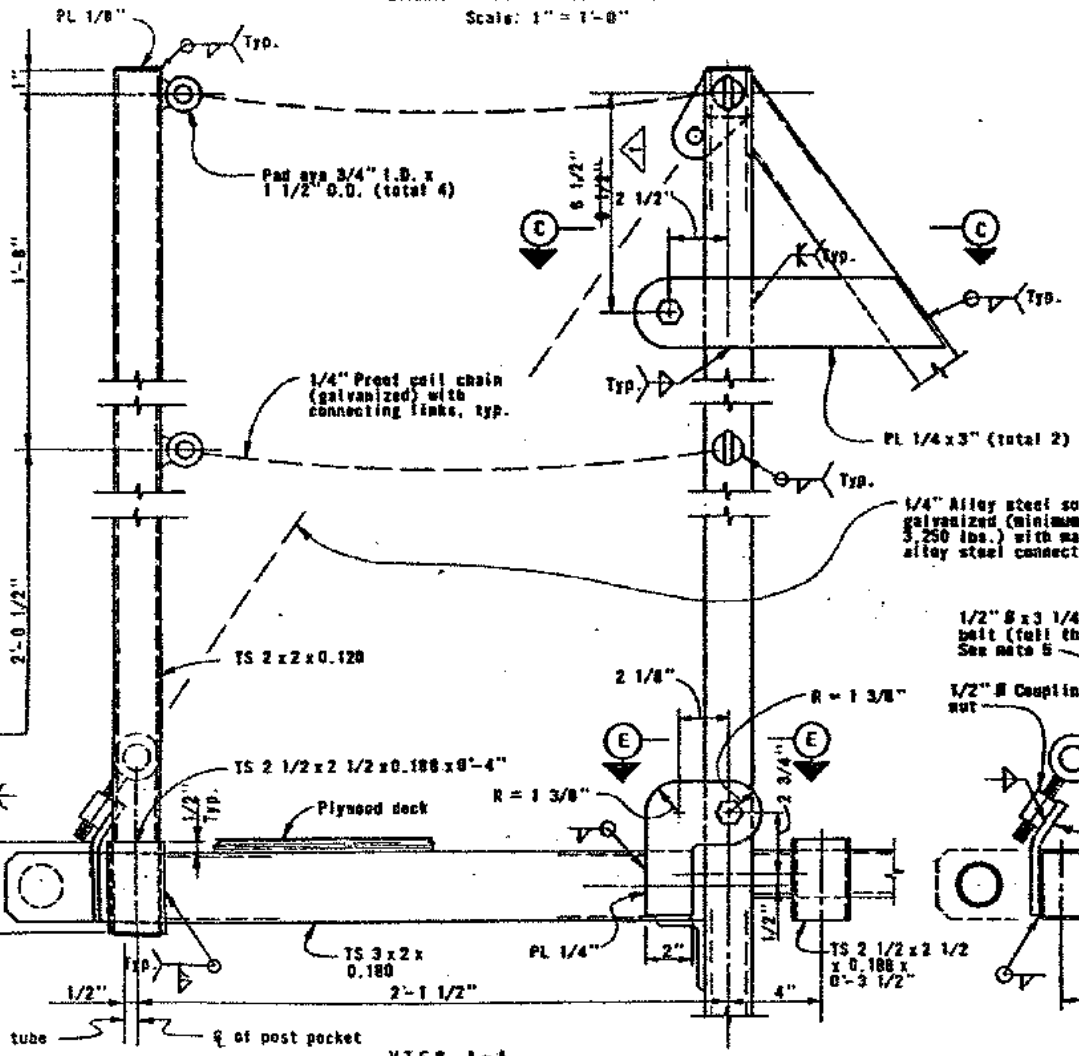


SECTION C-C
 (Upper tie-off)

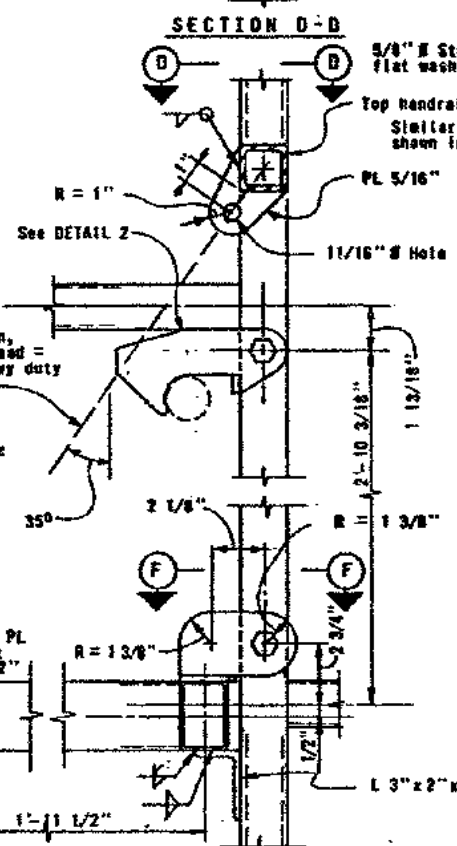


TYPICAL WELDING DETAILS
 At structural tubes

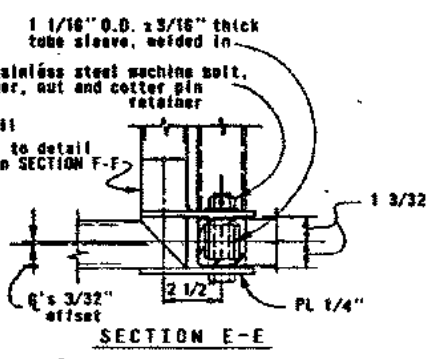
AS BUILT PLANS
 Contract No. *04-BQ1644*
 Date Completed *2-14-89*
 Document No. *...*



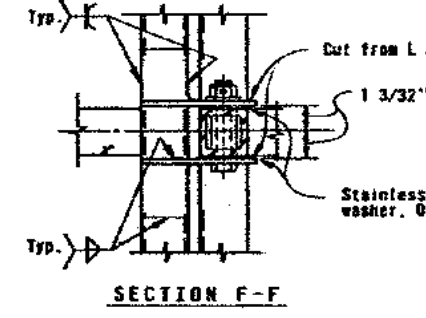
VIEW A-A
 See note 4



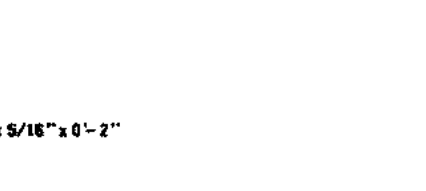
SECTION B-B
 See note 4



SECTION D-D



SECTION E-E



SECTION F-F

NOTES

1. Unless noted, all details shown are on 3 inch equal to one foot scale.
2. Unless otherwise shown, all connections are continuously welded with 3/16" weld.
3. Grease hinge and pivot bolts and sleeves with Moly EP grease.
4. Unless noted, details are similar at hinges and support chains shown in SECTIONS E-E and F-F.
5. Adjust eye bolts so that chains are taut just as platform seats fully.
6. Details of the pipe hanger and brackets are shown on sheet 21.

Contract No.	04-BQ1644
Date Accepted	2-14-89
At Scale	With revision 1
Resident Engineer	Ross A. Chittenden
Checked By	W. Zanolich
Date	11-17-88

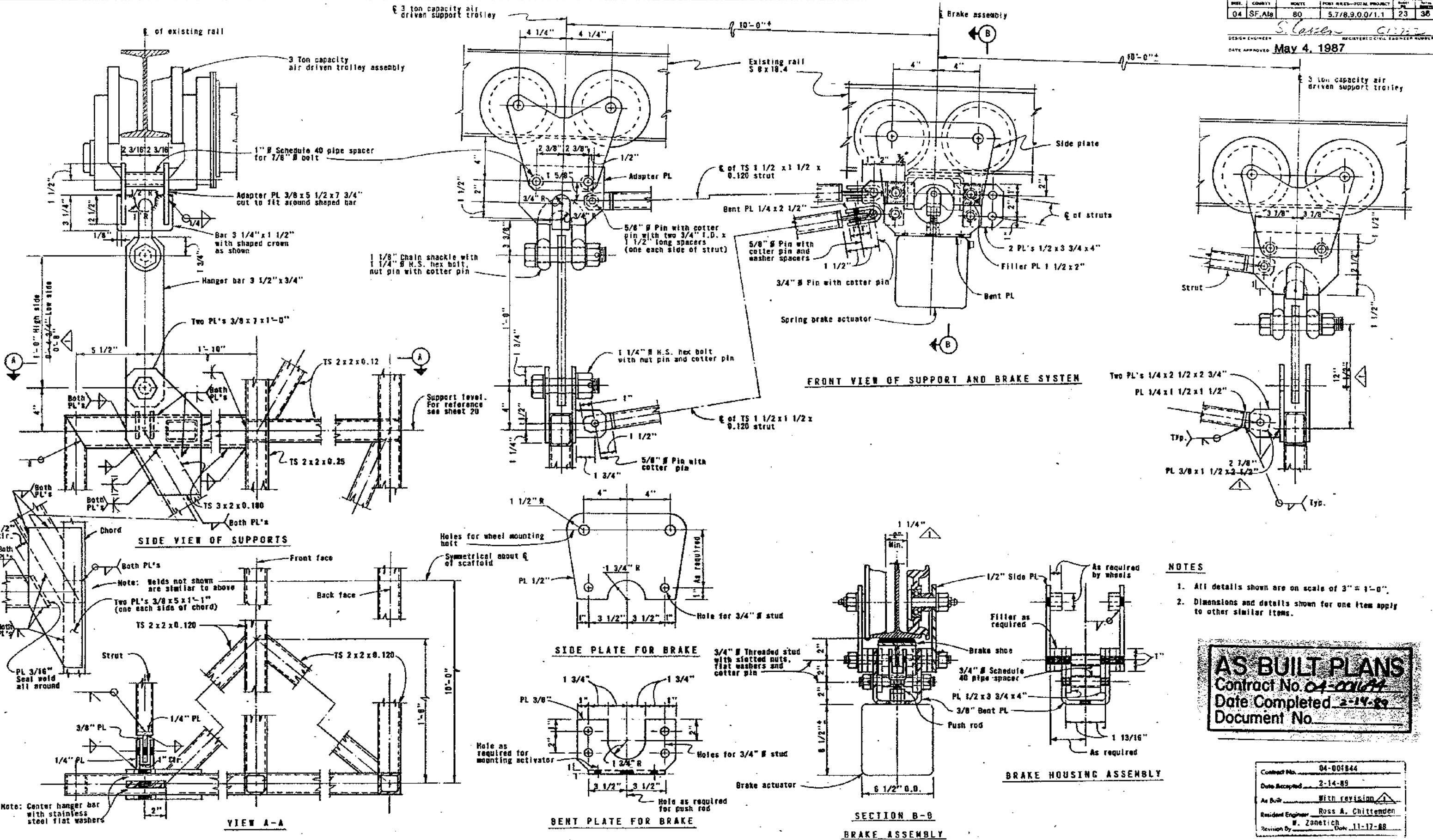
DESIGN	By J. Yee	Checked R. H. ...
DETAILS	By J. Yee	Checked R. H. ...
QUANTITIES	By R. H. ...	Checked R. H. ...

State of
CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

STRUCTURES - MAINT.
 J. Yee
 PROJECT ENGINEER

BRIDGE NO.	33/28, 34-03
POST MILE	

SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 TRUSS WEB SCAFFOLD DETAILS - 3



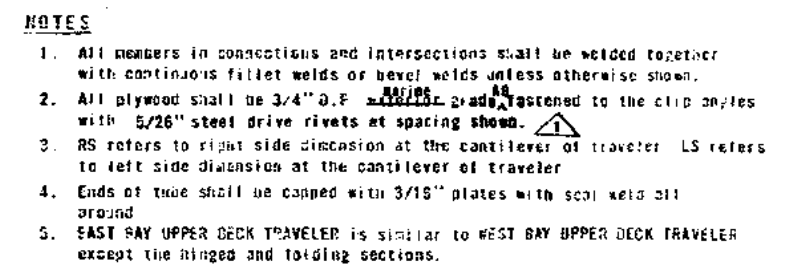
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DETAILS	By <i>J. Yee</i>	Checked <i>R. H. White</i>
QUANTITIES	By <i>R. H. White</i>	Checked <i>R. H. White</i>

State of
CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

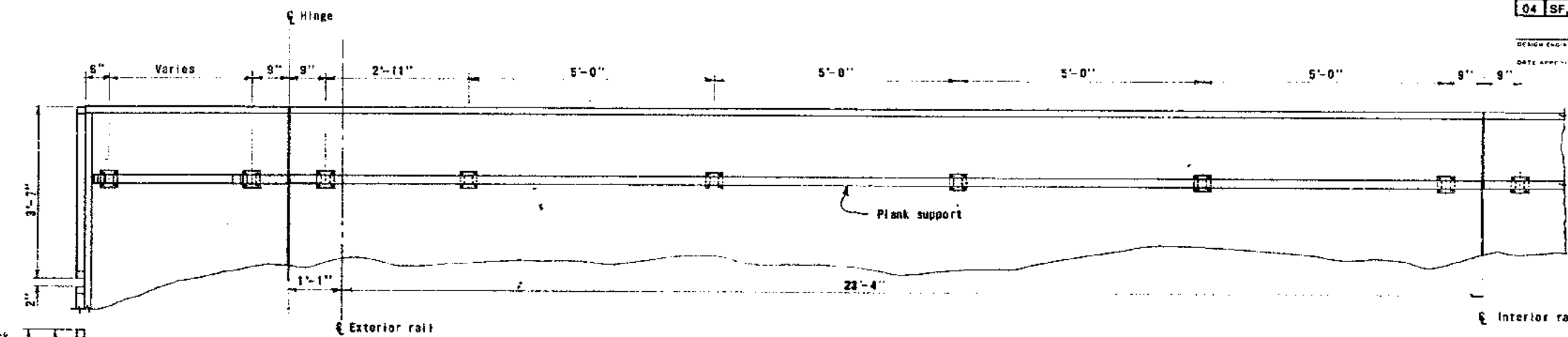
STRUCTURES - MAINT.
 J. Yee
 PROJECT ENGINEER

BRIDGE NO.
 33-25,34-03
 POST MILE

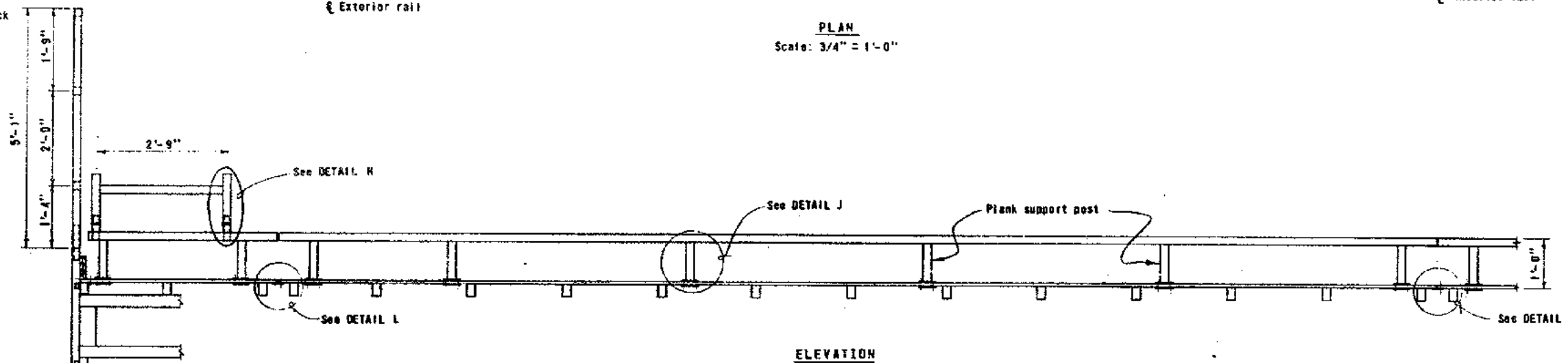
SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 TRUSS WEB SCAFFOLD DETAILS - 4



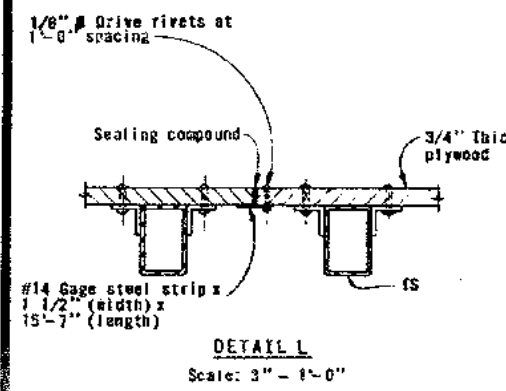
DESIGN	By R. Castro	Checked <i>David Wu</i>	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES - MAINT. <i>R. Castro</i> C35231	BRIDGE NO.	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS
DETAILS	By H. Castro	Checked <i>David Wu</i>			33-25, 34-03	
QUANTITIES	By R. Castro	Checked			POST MILE	



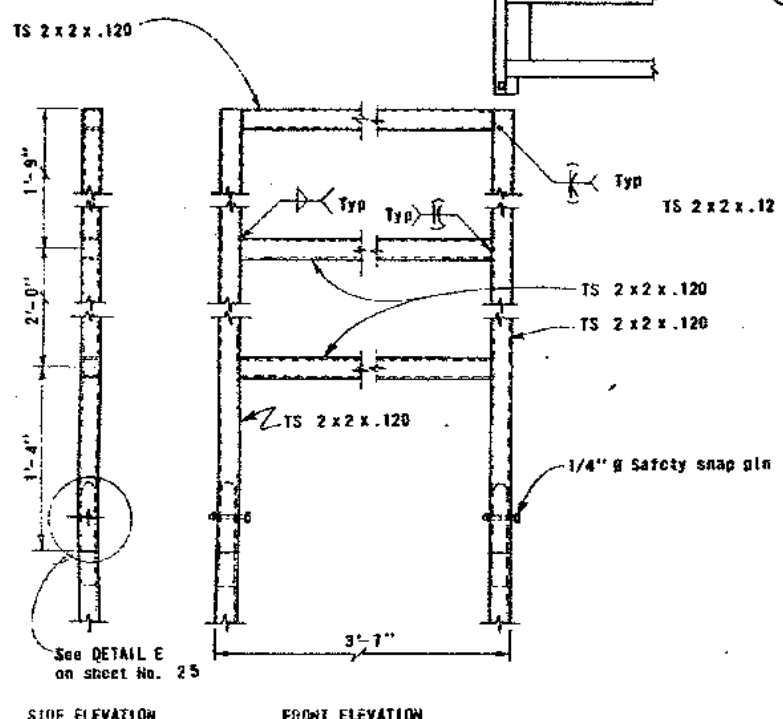
PLAN
 Scale: 3/4" = 1'-0"



ELEVATION
 Scale: 3/4" = 1'-0"



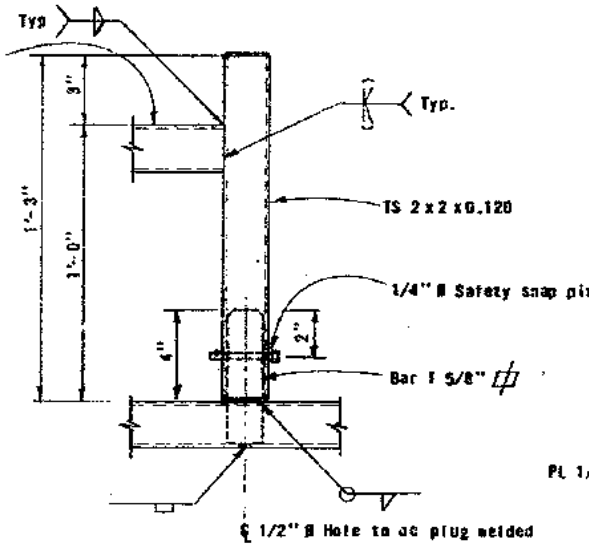
DETAIL L
 Scale: 3" = 1'-0"



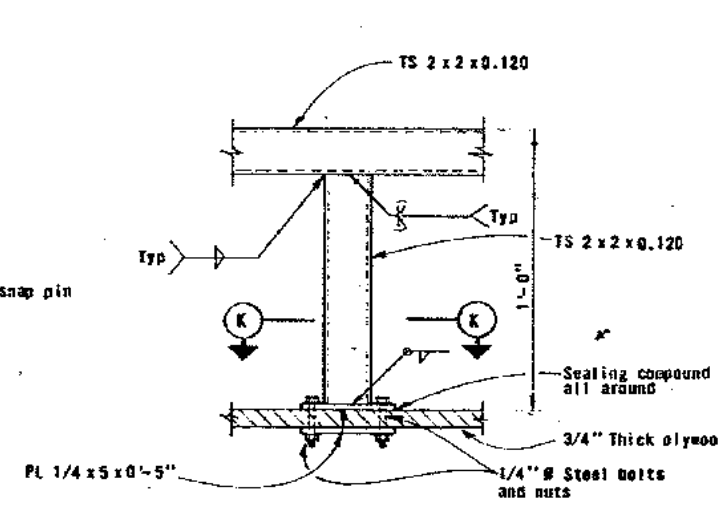
SIDE ELEVATION

FRONT ELEVATION

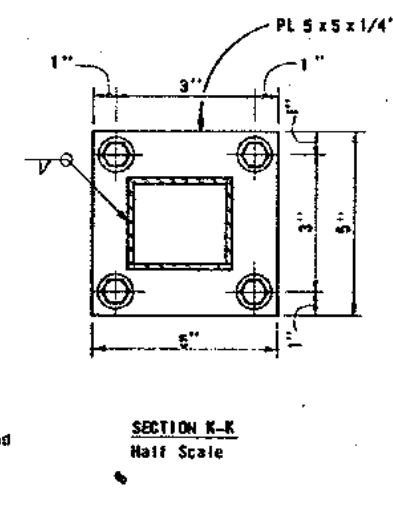
RAILING
 Scale: 1 1/2" = 1'-0"



DETAIL H (Typical)
 Scale: 3" = 1'-0"



DETAIL I
 Scale: 3" = 1'-0"



SECTION K-K
 Half Scale

PLANK SUPPORT

AS BUILT PLANS
 Contract No. 04-001644
 Date Completed 2-14-88
 Document No.

Contract No.	04-001644
Date Accepted	2-14-88
As Built	Without revision
Resident Engineer	Ross A. Chittenden
Revision by	G. Zanicchi Date 11-17-88

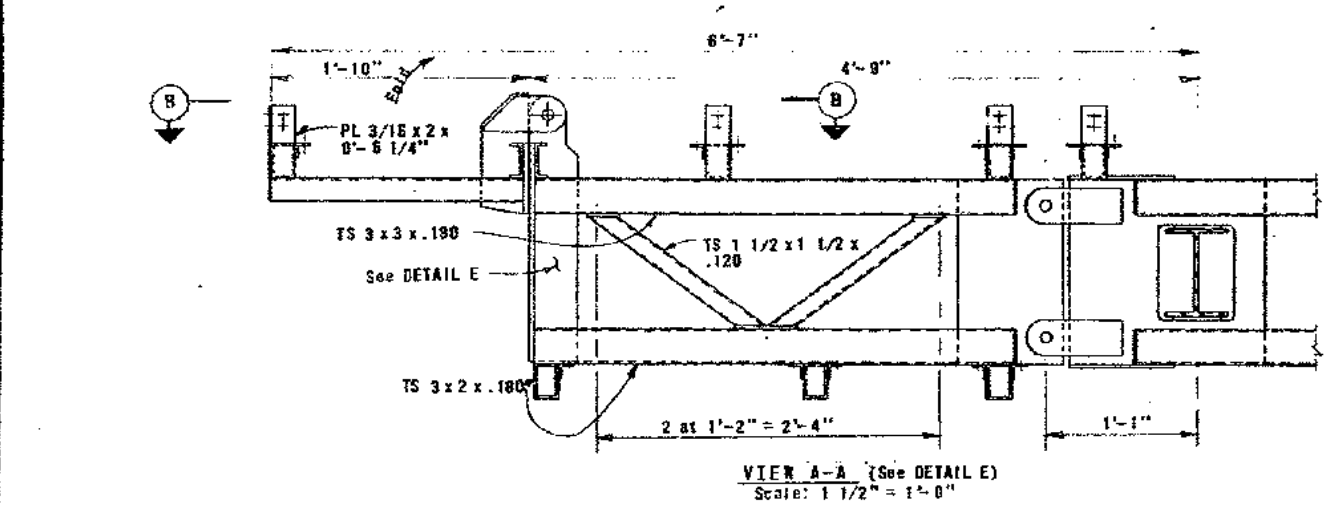
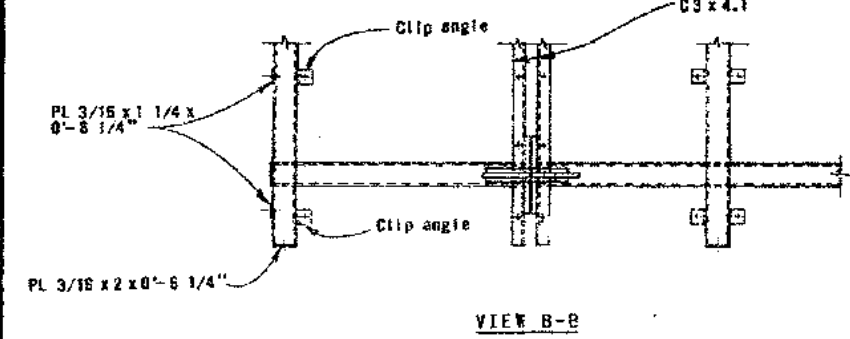
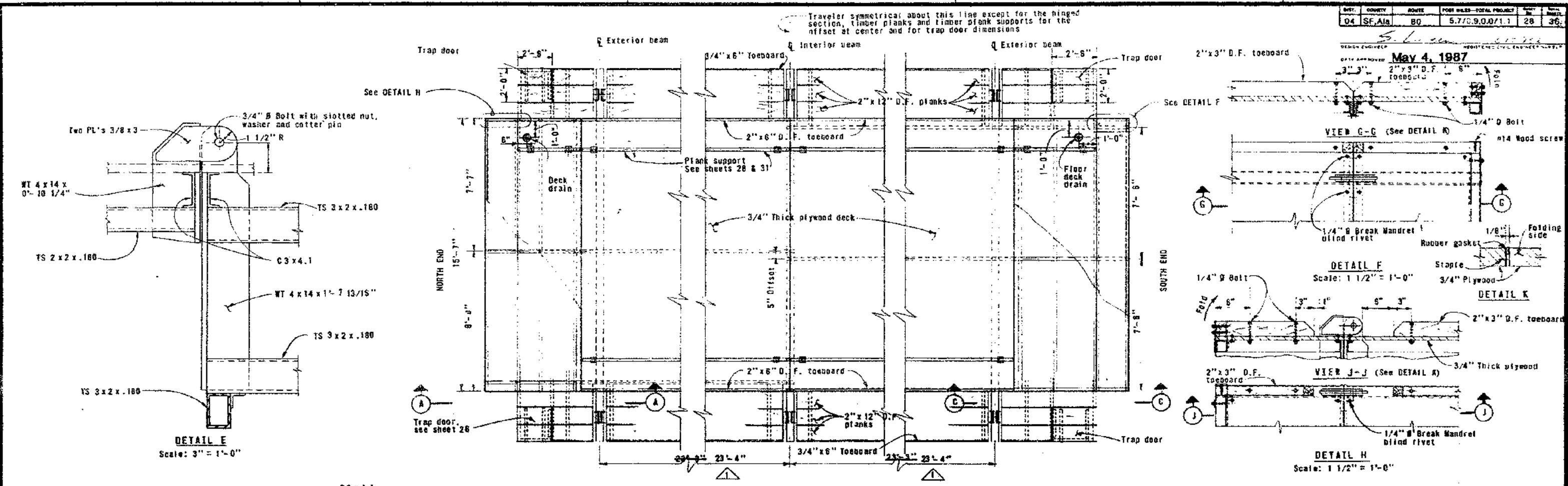
DESIGN	By R. Castro	Checked <i>David L. Castro</i>
DETAILS	By R. Castro	Checked <i>David L. Castro</i>
QUANTITIES	By R. Castro	Checked

State of
CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

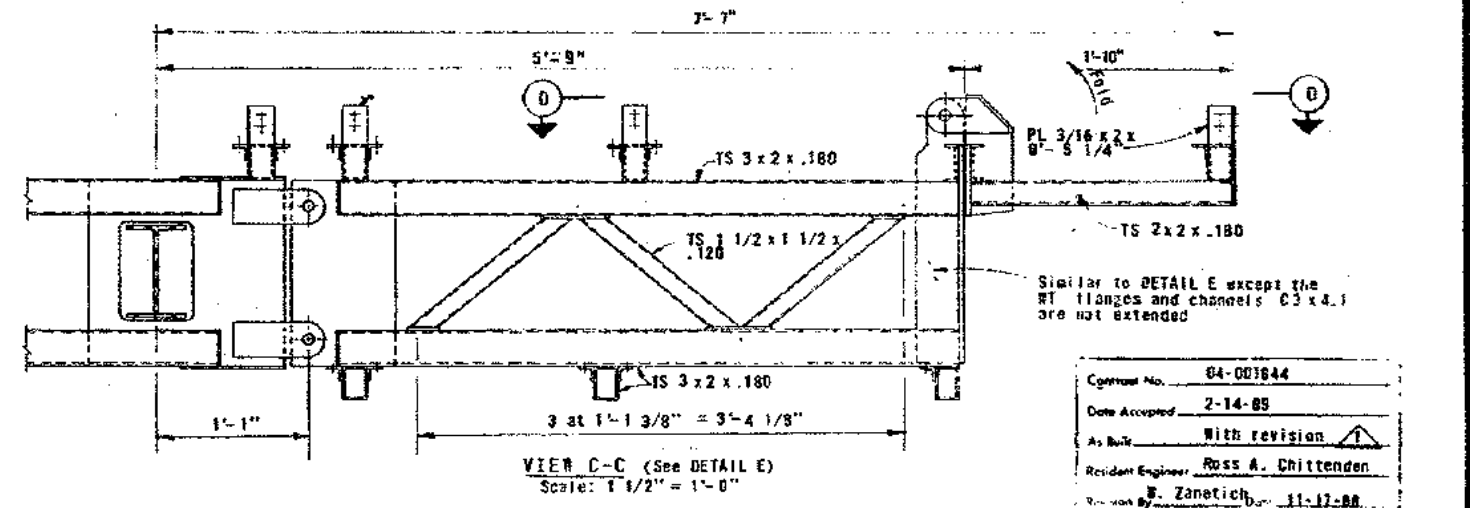
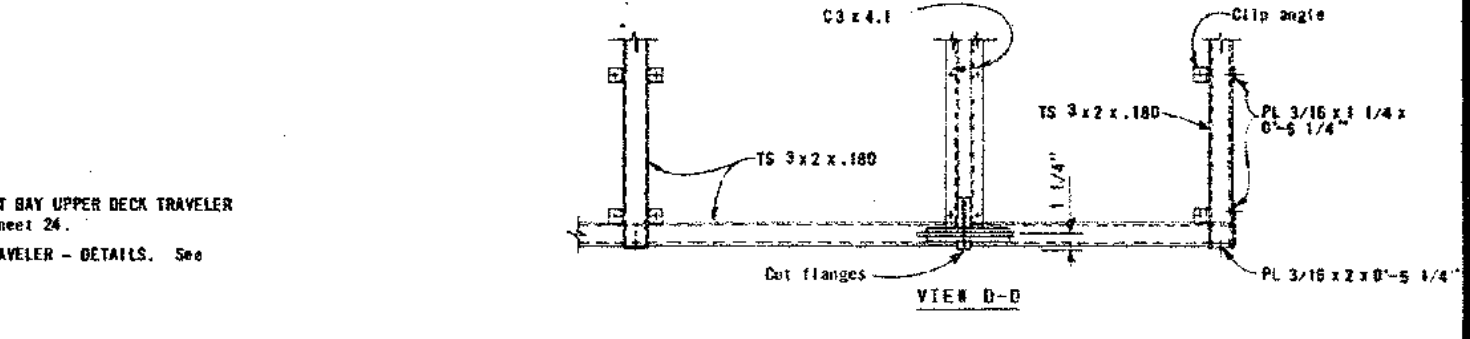
STRUCTURES - MAINT.
R.J. Castro C39231
 PROJECT ENGINEER REGISTERED CIVIL ENGINEER NO.

BRIDGE NO.	33-25.34-03
POST MILE	5.7/0.0

SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 WEST BAY UPPER DECK TRAVELER PLANK SUPPORT AND RAILING

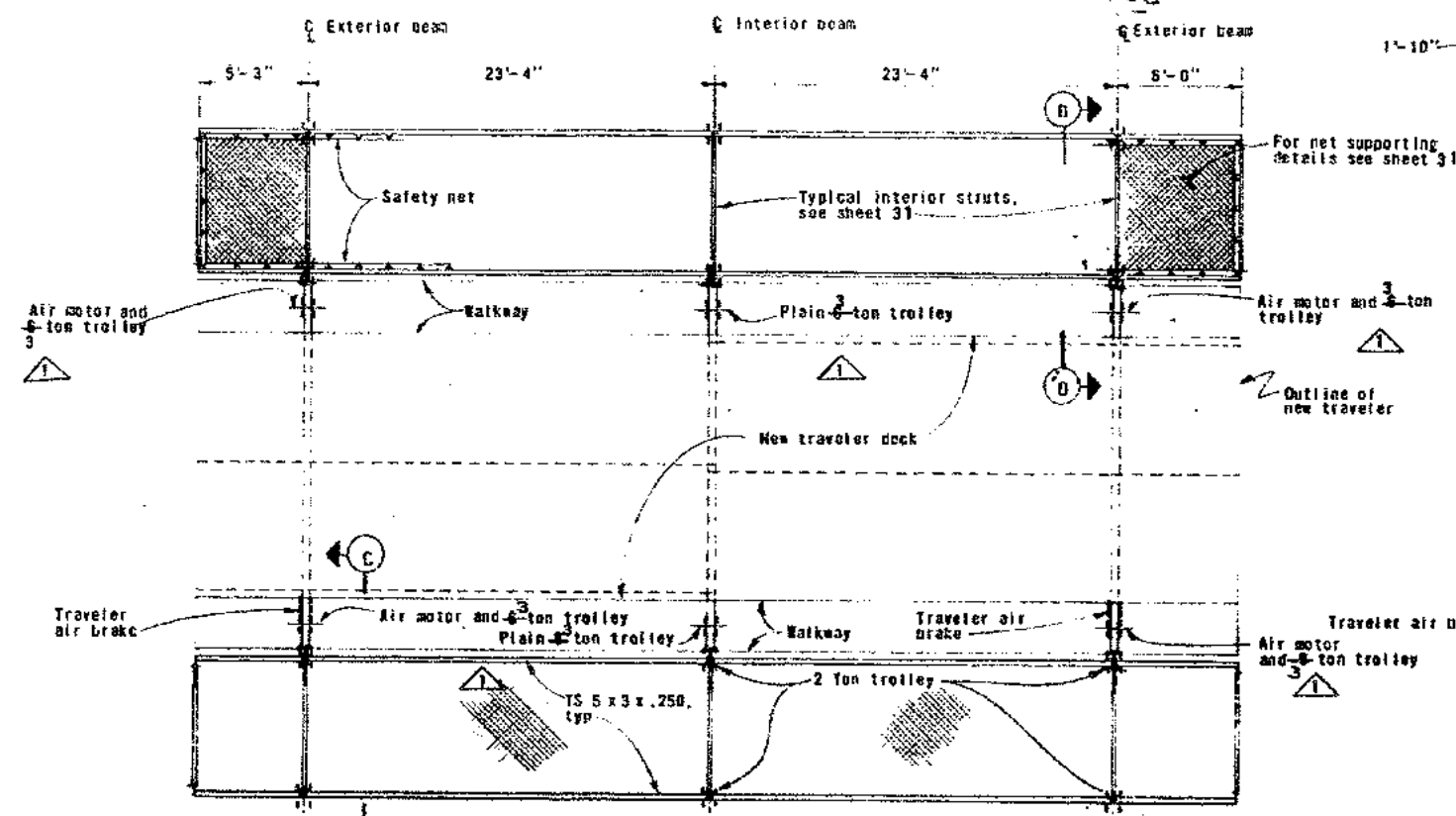


- NOTES**
1. EAST BAY UPPER DECK TRAVELER is similar to WEST BAY UPPER DECK TRAVELER except the hinged and folding sections. See sheet 24.
 2. For hinged details, see WEST BAY UPPER DECK TRAVELER - DETAILS. See sheet 25.

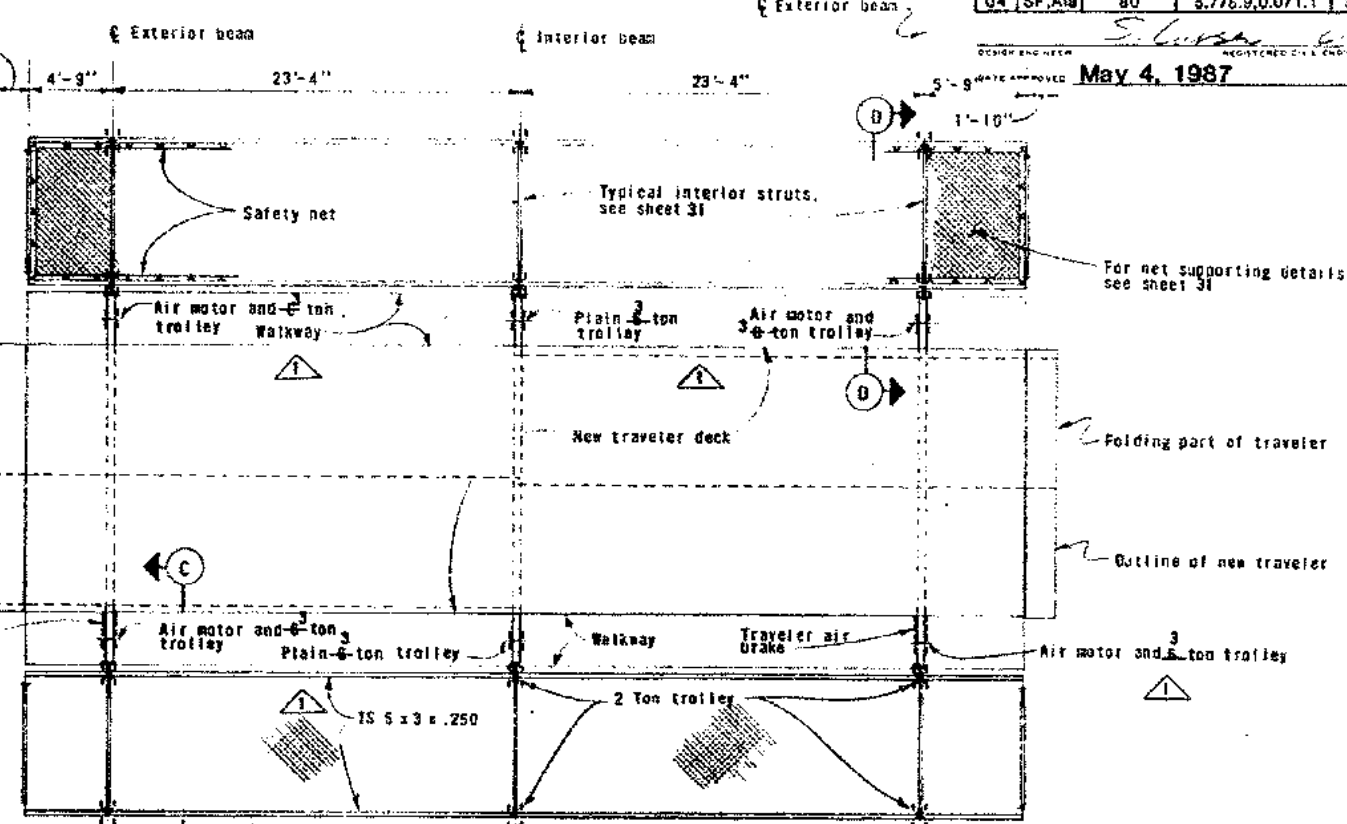


Contract No. 84-001844
 Date Accepted 2-14-85
 As Built With revision
 Resident Engineer Ross A. Chittenden
 S. Zanetich 11-17-88

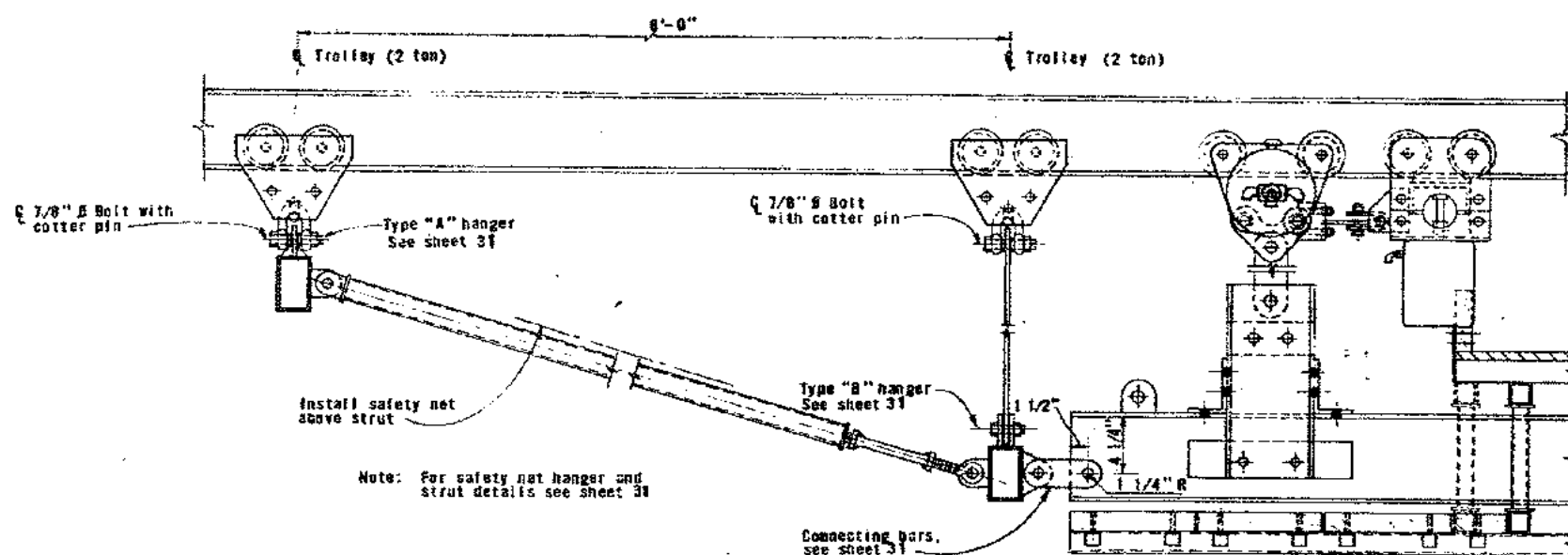
DESIGN	By R. Castro	Checked <i>Daniel</i>	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION PROJECT ENGINEER <i>R.J. Castro</i> C36231 REGISTERED CIVIL ENGINEER	BRIDGE NO.	23-25, 34-03	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS EAST BAY UPPER DECK TRAVELER
DETAILS	By R. Castro	Checked <i>Daniel</i>		POST MILE	5.7/8.0	
QUANTITIES	By R. Castro	Checked				



PLAN - WEST BAY
 Scale: 3/16" = 1'-0"



PLAN - EAST BAY
 Scale: 3/16" = 1'-0"



SECTION C-C
SECTION D-D (Similar to C-C except no traveler brake)
 Scale: 1 1/2" = 1'-0"

NOTES

- Safety nets shall be fabricated from black polypropylene rope. The mesh shall be 5/16 inch diameter, weighing not less than 1.9 pounds per 100 linear feet and having a minimum breaking strength of at least 1350 pounds. The edge rope shall be 5/8 inch diameter and shall have a minimum breaking strength of at least 5300 pounds. The safety net mesh openings shall not exceed 6 inches by 5 inches, measured center to center on the mesh ropes. The mesh rope crossings and ties of the mesh rope to the edge rope shall be secured with ties of fiberglass reinforced polyester resin.

AS BUILT PLANS
 Contract No. **04-001644**
 Date Completed **2-14-89**
 Document No. _____

Contract No.	04-001644
Date Assigned	2-14-89
As Built	With revision
Resident Engineer	Ross A. Chittenden
Revision By	J. Zornitsch
Date	11-17-88

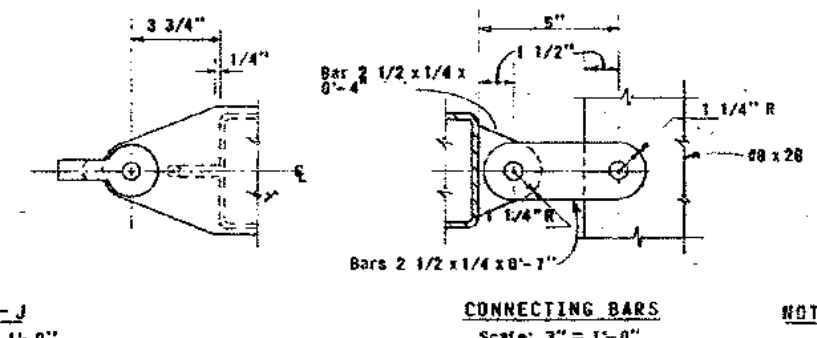
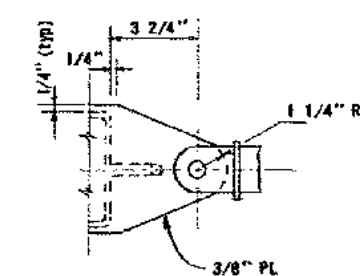
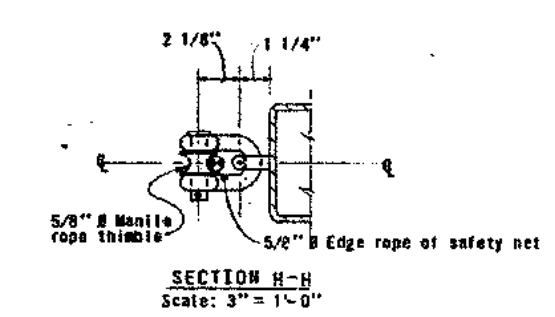
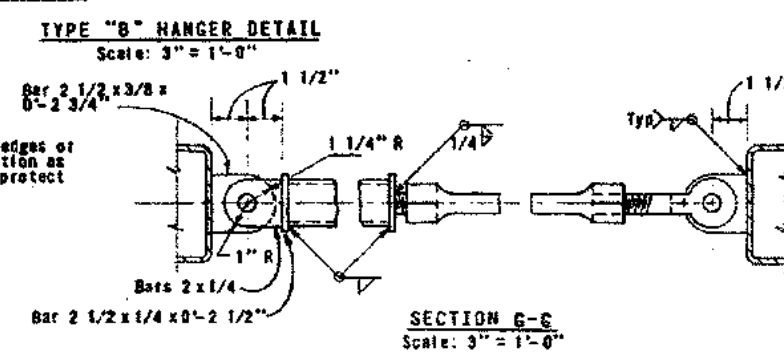
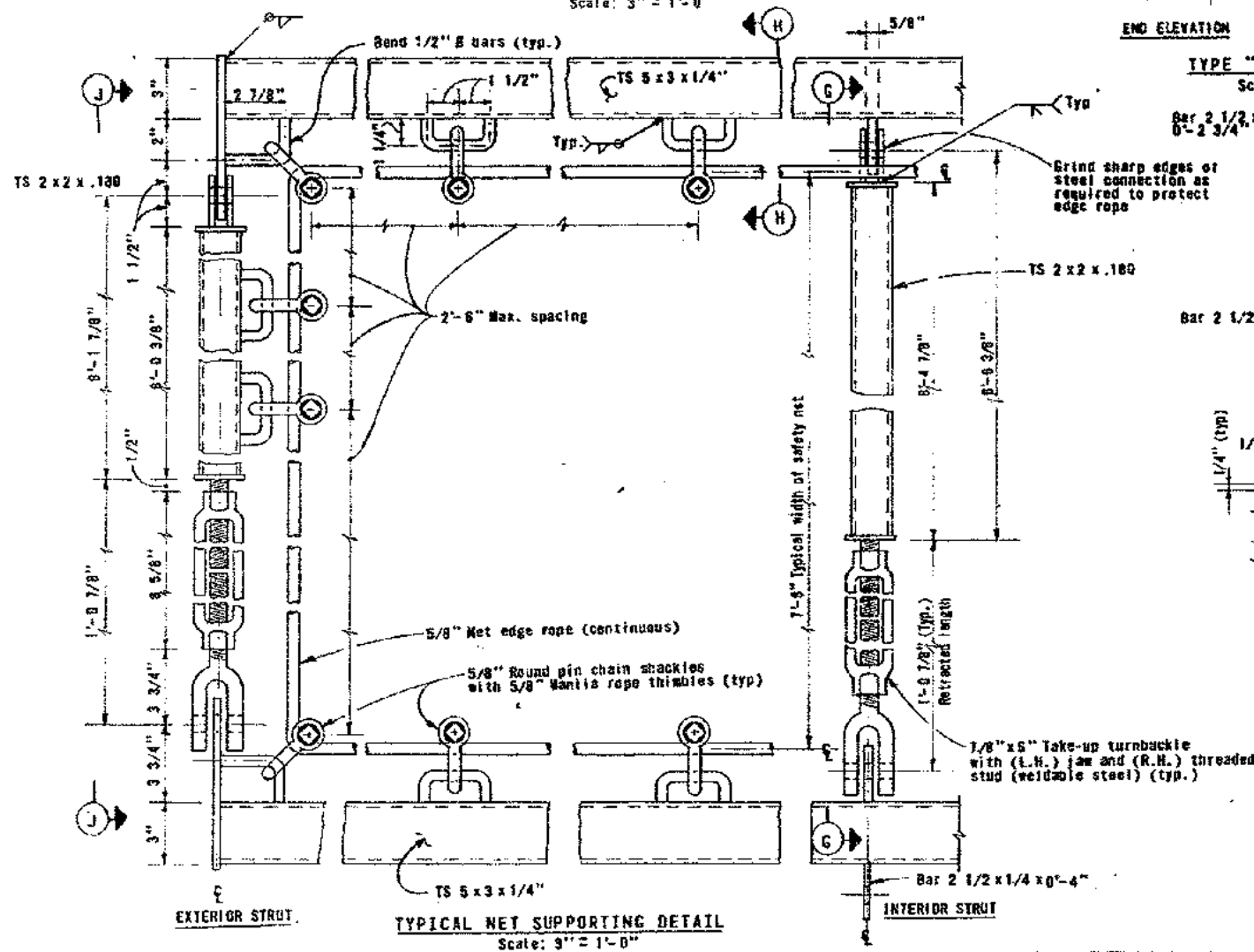
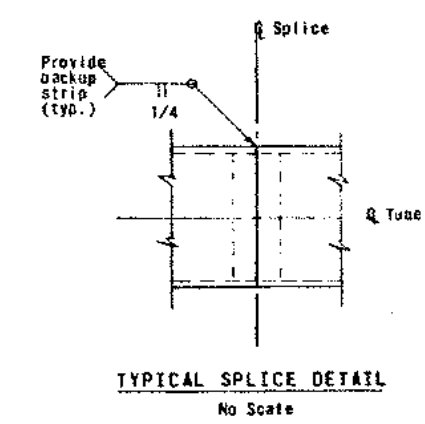
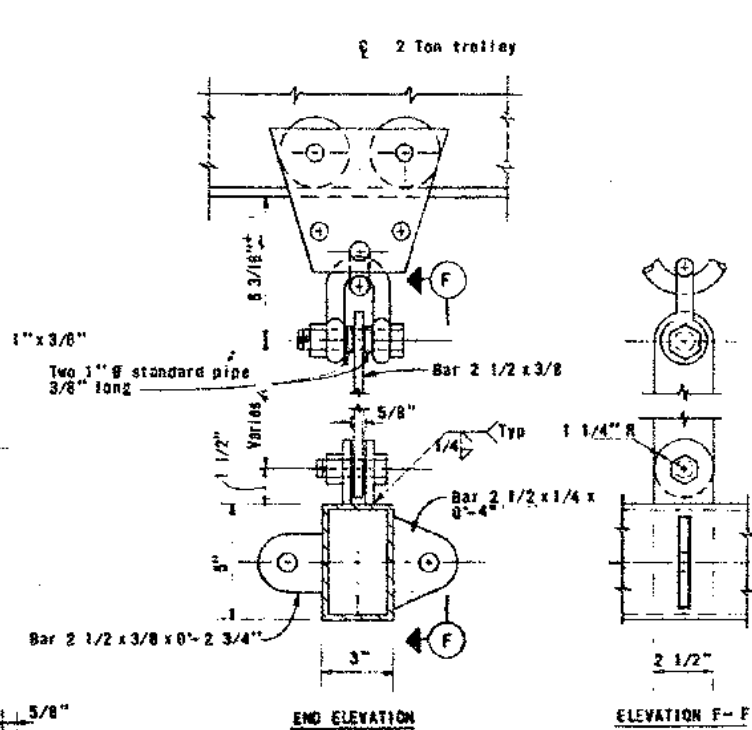
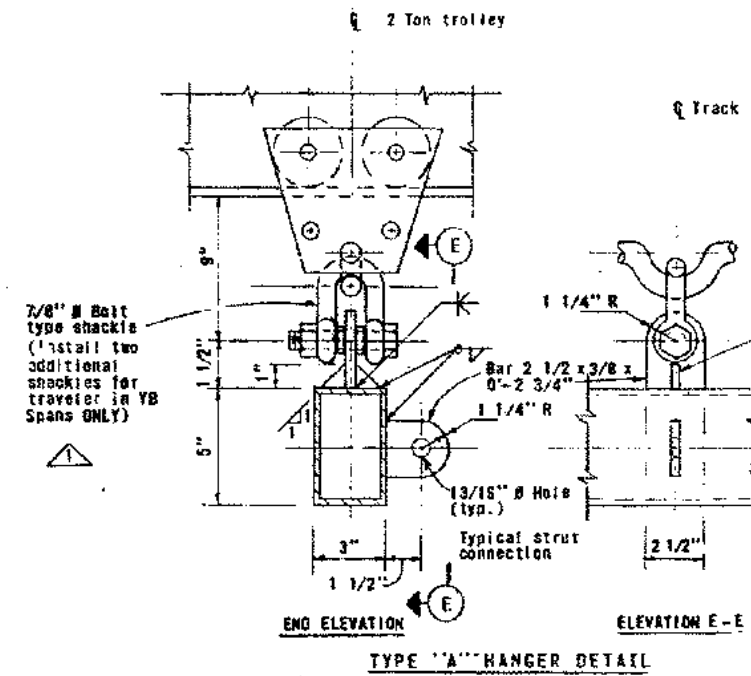
DESIGN	By R. Castro	Checked <i>Daniel...</i>
DETAILS	By R. Castro	Checked <i>Daniel...</i>
QUANTITIES	By R. Castro	Checked

State of CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

STRUCTURES - MAINT.
 PROJECT ENGINEER: *R. J. Castro*
 REGISTERED CIVIL ENGINEER NO. 035231

BRIDGE NO.	33-25/34-03
POST MILE	5.7/6.9

SAN FRANCISCO - OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 SAFETY NETS FOR WEST BAY AND EAST BAY UPPER DECK TRAVELERS



AS BUILT PLANS
 Contract No. *04-001644*
 Date Completed *2-14-89*
 Document No. _____

Contract No.	04-001644
Date Accepted	2-14-89
As Built	With revision
Resident Engineer	Ross A. Chittenden
Revision By	S. J. Castro
Date	2-17-89

- NOTES**
1. Bolts shall be ASTM A307 3/4" # hex type and have nuts with 1/8" cotter pins except as noted.
 2. All safety nets shall be installed without any sag along the width axis or in line between shackles supports and the ends shall be snugly fastened to supports.

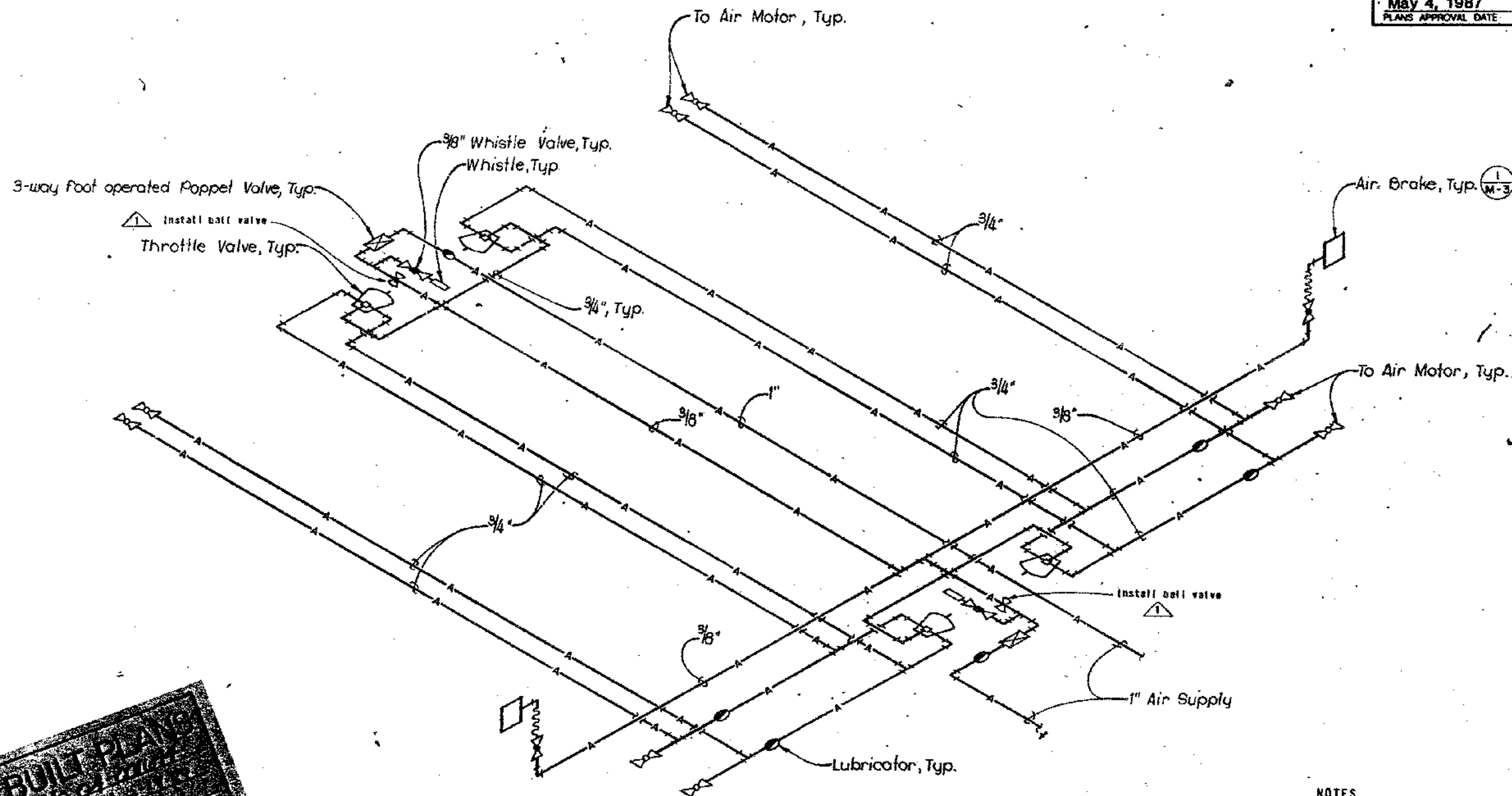
DESIGN	By R. Castro	Checked <i>David W. Danilov</i>	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES - MAINT. <i>R. J. Castro</i> C36231 PROJECT ENGINEER REGISTERED CIVIL ENGINEER NO.	BRIDGE NO.	33-25/34-83	SAN FRANCISCO - OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS
DETAILS	By R. Castro	Checked			POST MILE	5.7/0.0	
QUANTITIES	By R. Castro	Checked			SAFETY NET DETAILS		

ORIGINAL SCALE IN INCHES

CU 111

REVISION DATES (PREF. PRIMARY STAGE ONLY)

SHEET 31 OF 36

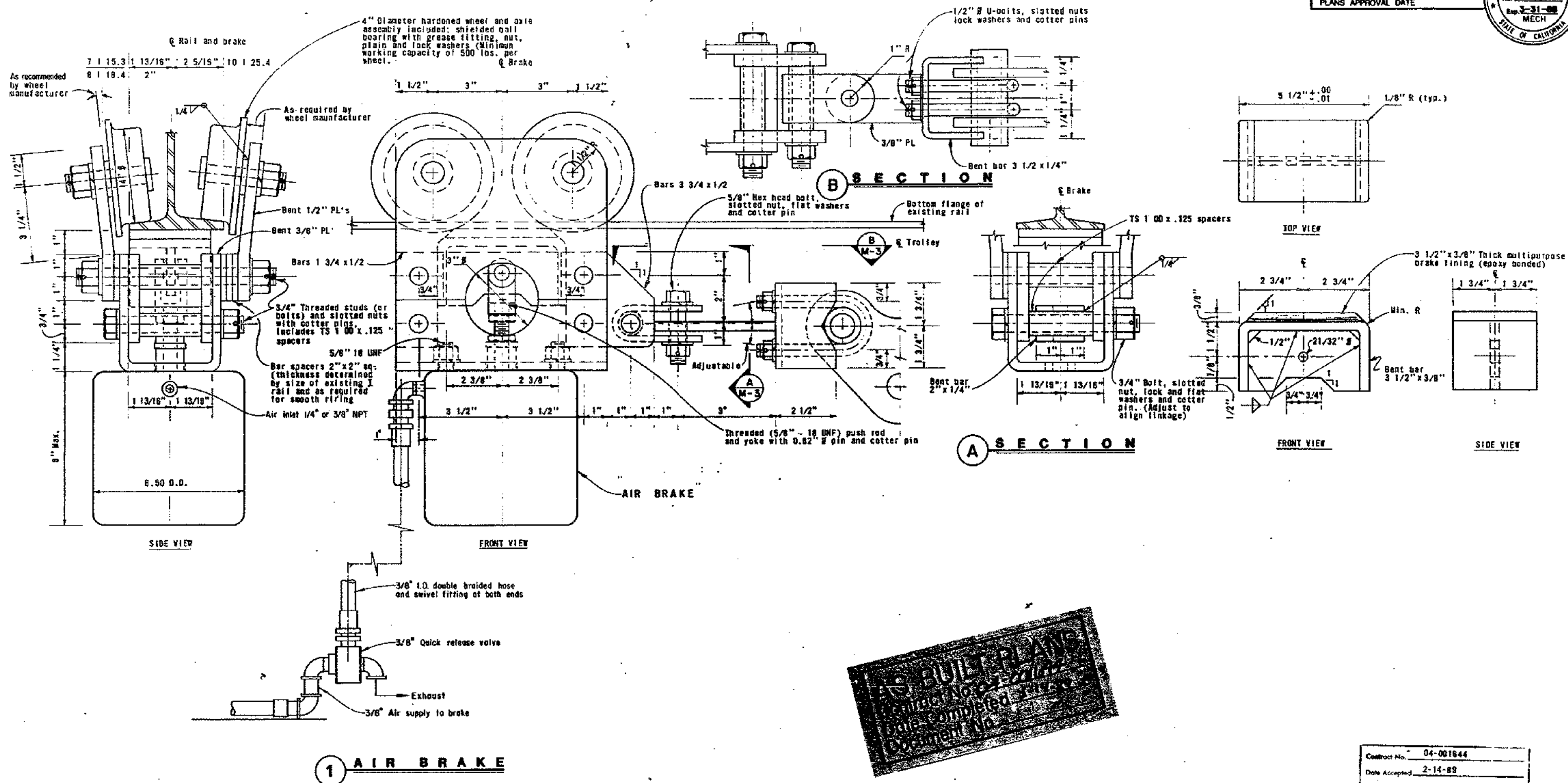


NOTES
 1. Modify throttle valve to prevent exhausting in neutral.

AS BUILT PLANS
 Contract No. 04-001944
 Date Completed 11/86
 Document No. 11-17-88

AIR BRAKE PIPING DIAGRAM

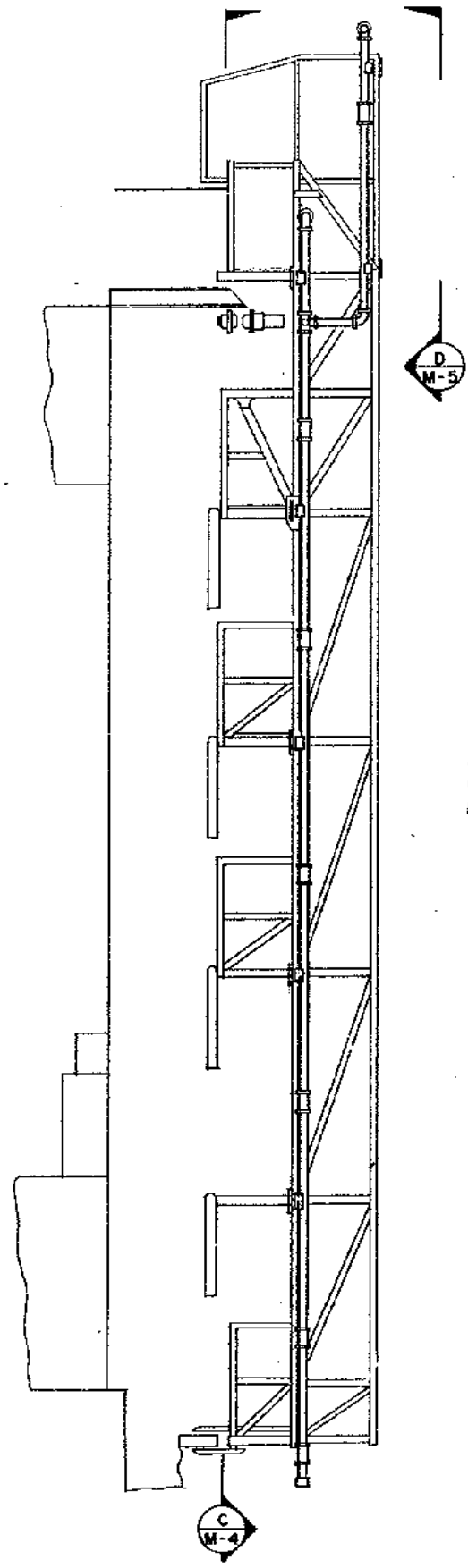
Contract No. 04-001944
 Date Accepted 2-14-89
 As Built With revision
 Resident Engineer Ross A. Chittenden
 Revision By J. Zanetich Date 11-17-88



DESIGN	By H. Plan	Checked Alan M. Torres	State of CALIFORNIA	DIVISION OF STRUCTURES	BRIDGE NO.	33-25/34-05	SAN FRANCISCO-OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS AIR BRAKE DETAILS	SHEET M-3
DETAILS	By RA Sorte 11/86	Checked H. Plan	DEPARTMENT OF TRANSPORTATION	ELECTRICAL-MECHANICAL-SANITARY	POST MILE	0.0/1.1		
QUANTITIES	By H. Plan	Checked Alan M. Torres		PROJECT ENGINEER				

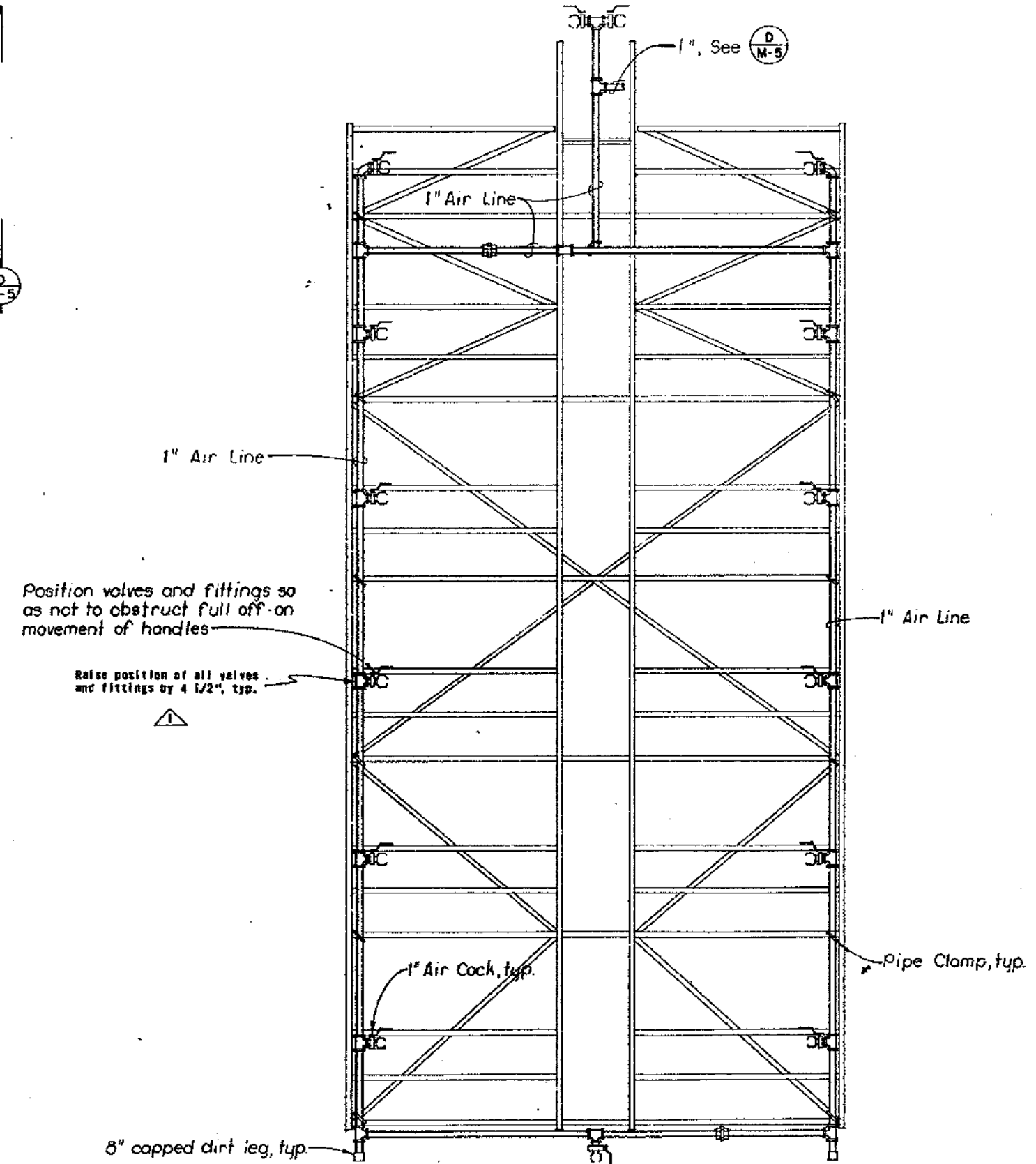
CU 04333

REVISION DATES (PRELIMINARY STAGE ONLY)

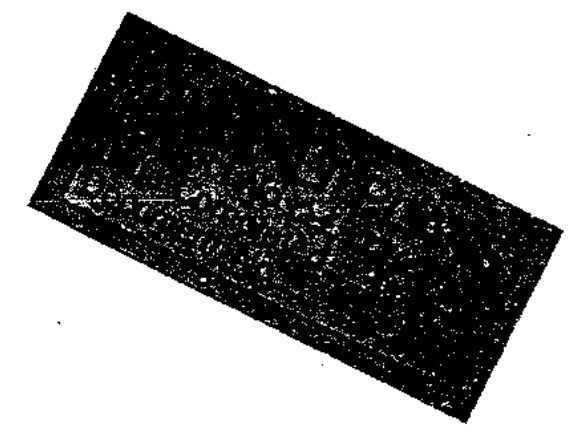


SIDE ELEVATION

THIS DRAWING ACCURATE FOR MECHANICAL WORK ONLY SCALE : 3/8" = 1'-0"



ELEVATION



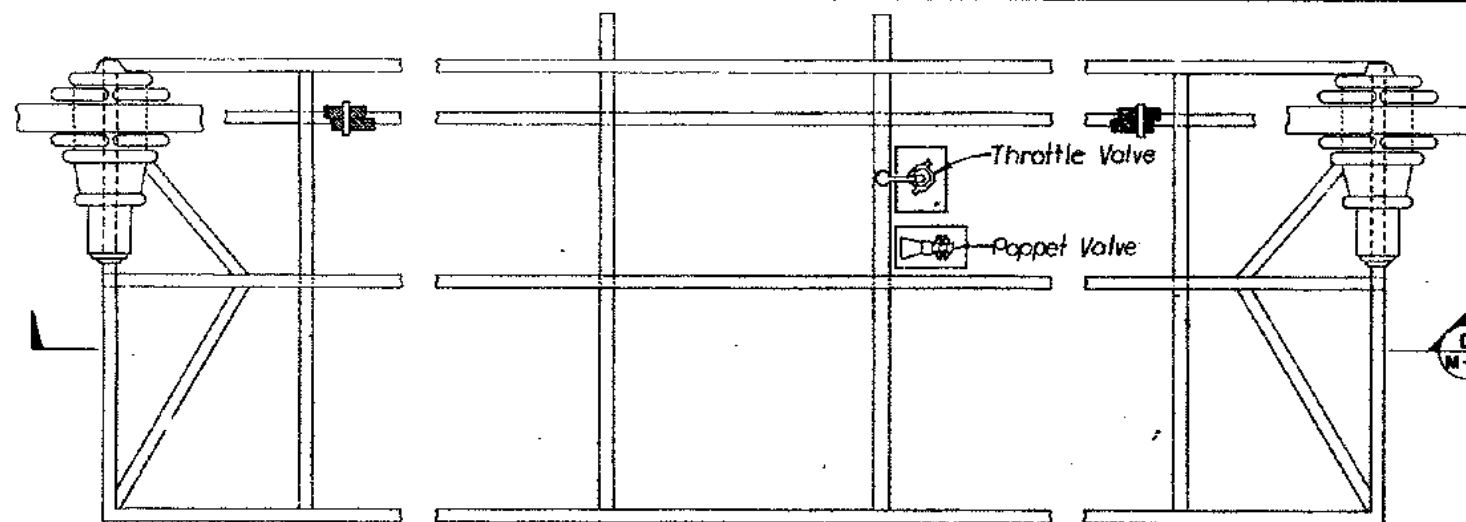
Contract No.	04-001844
Date Accepted	2-14-89
As Built	With revision
Resident Engineer	Ross A. Chittenden
Revision By	T. Zanetich
Date	11-17-88

DESIGN	By H. Plan	Checked Alan Torres	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES ELECTRICAL-MECHANICAL-SANITARY H. Plan M20269	BRIDGE NO. 33-25/34-03 POST MILE 0.0 / 1.1	SAN FRANCISCO-OAKLAND BAY BRIDGE MAINTENANCE SAFETY IMPROVEMENTS TRUSS WEB SCAFFOLD	SHEET M-4
DETAILS	By R.A. Sorte	3/86					
QUANTITIES	By H. Plan						

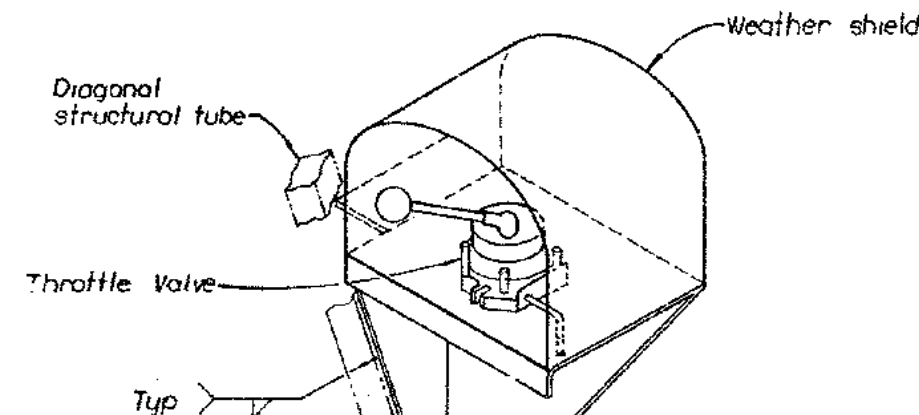
REVISION DATES (PRELIMINARY STAGE ONLY) SHEET 35 OF 36

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	SF, Alameda	80	5.7/8.9, 0.01.1	36	36

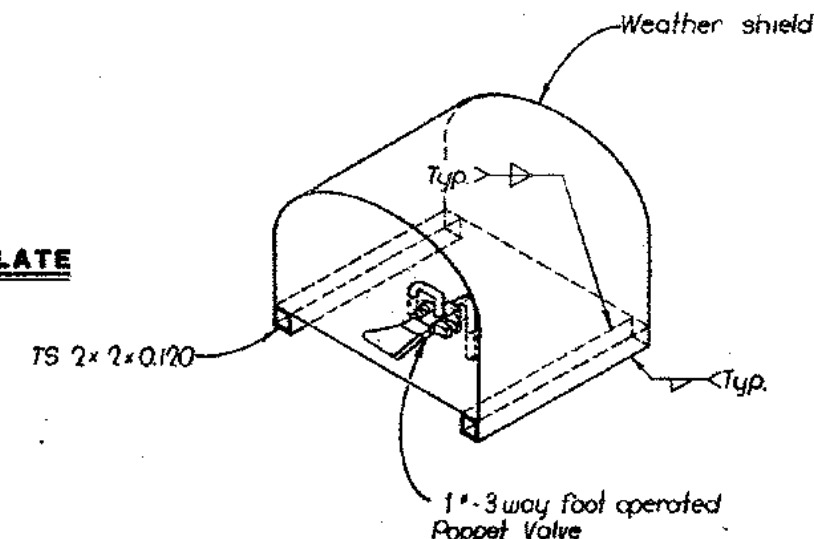
REGISTERED PROFESSIONAL ENGINEER
 May 4, 1987
 PLANS APPROVAL DATE
 17007
 MECH
 STATE OF CALIFORNIA



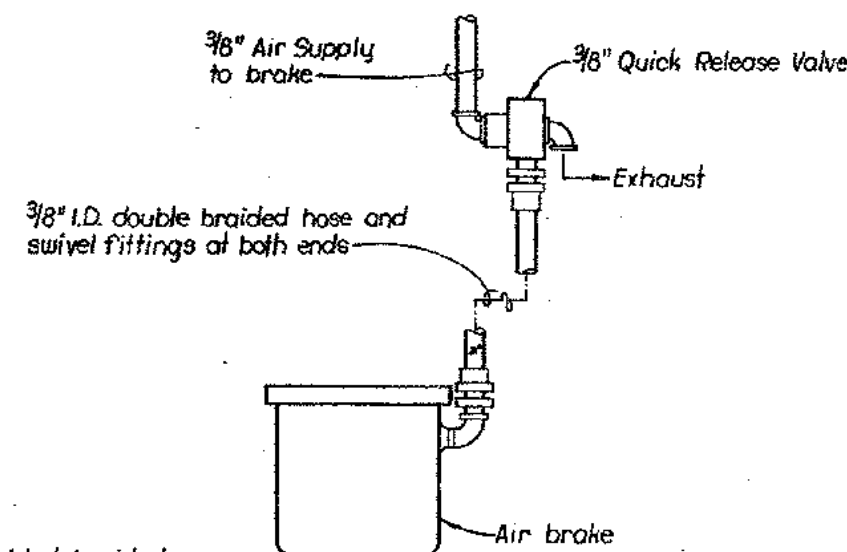
PART PLAN



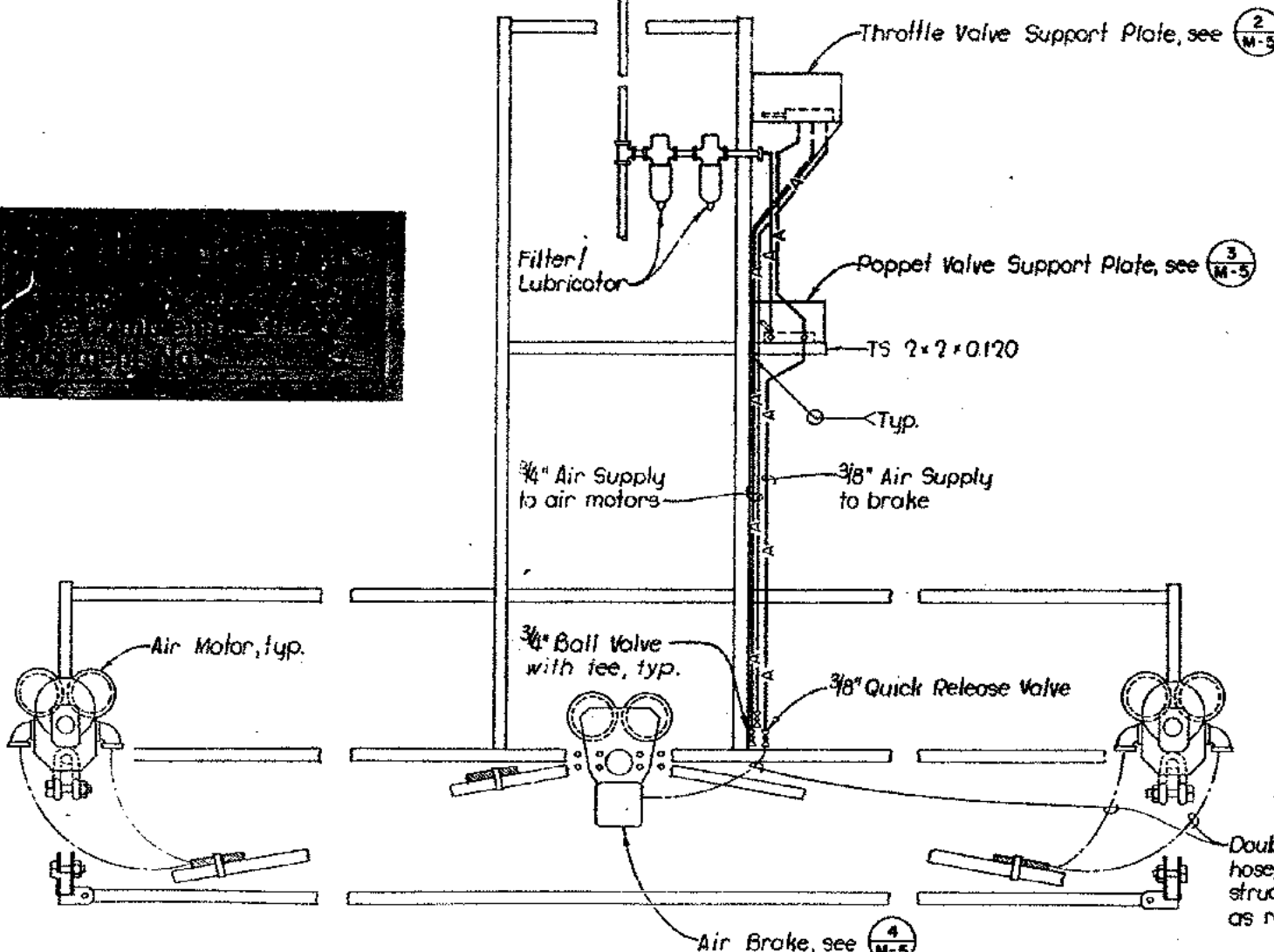
2 THROTTLE VALVE SUPPORT PLATE



3 POPPET VALVE SUPPORT PLATE



4 AIR BRAKE



D SECTION

- NOTES:
- ALL PIPING SHALL BE SUPPORTED TO STRUCTURAL MEMBERS AS REQUIRED.
 - CONNECTIONS FROM 3/4" BALL VALVE TO AIR MOTORS SHALL BE 3/4" DOUBLE BRAIDED HOSE RATED AT 150 PSI MINIMUM WORKING PRESSURE.
 - WEATHER SHIELD SHALL BE 10 GAGE SHEET METAL, SIZE TO SUIT EQUIPMENT.

Contract No. 04-001844
 Date Accepted 2-14-89
 As Built WITHOUT DIVISION
 Resident Engineer ROSS A. Chittenden
 Revision By J. Zanetich Date 11-17-88

THIS DRAWING ACCURATE FOR MECHANICAL WORK ONLY

NO SCALE

DESIGN	By H. Plan	Checked Alex Torres
DETAILS	By R.A. Sarte 3/86	Checked H. Plan
QUANTITIES	By K. Plan	Checked Alex Torres

ORIGINAL SCALE IN INCHES

State of CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
 ELECTRICAL-MECHANICAL-SANITARY
 H. Plan M20269
 PROJECT ENGINEER

BRIDGE NO.
 33-25/34-03
 POST MILE
 0.07/1.1

SAN FRANCISCO-OAKLAND BAY BRIDGE
 MAINTENANCE SAFETY IMPROVEMENTS
 TRUSS WEB SCAFFOLD CONTROL DETAILS

SHEET
 M-5

CU 04333

REVISION DATES PRELIMINARY STAGE ONLY

SHEET 36



DETAIL C-1



No Scale

No Scale

GENERAL NOTE ON DIMENSIONS: All dimensions of the existing structure necessary to perform the work shown on this sheet shall be verified by the Contractor in the field. Dimensions shown for the existing structure are taken from construction drawings. The Contractor shall verify field dimensions and shall be responsible for finished structures fitting existing conditions since minor variations are to be anticipated.

CONTRACT CHANGE ORDER No. 6 - SHEET 2 of 2

State of
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PRINCE ENGINEER REGISTERED CIVIL ENGINEER

POST OFFICE

LIGHT FIXTURE SUPPORTS AND TRANSFORMER MOUNTING BRACKETS